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DISCUSS \_\_\_\_\_

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and the advantages  
of the South as a  
manufacturing field.

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VOL. XXXIII  
No. 5.

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Baltimore, February 25, 1898.

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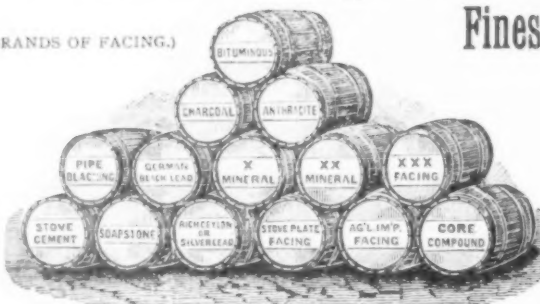
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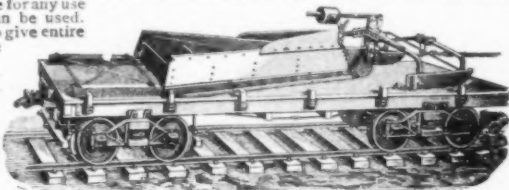
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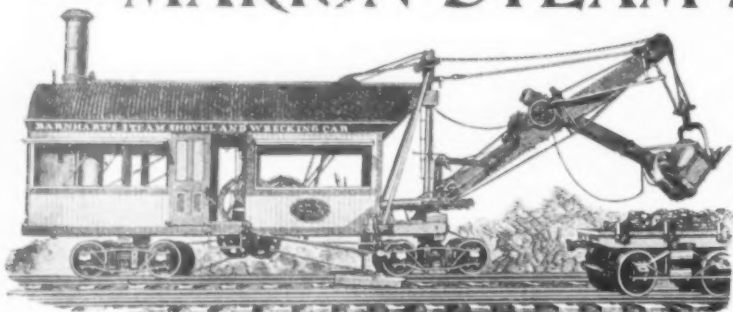
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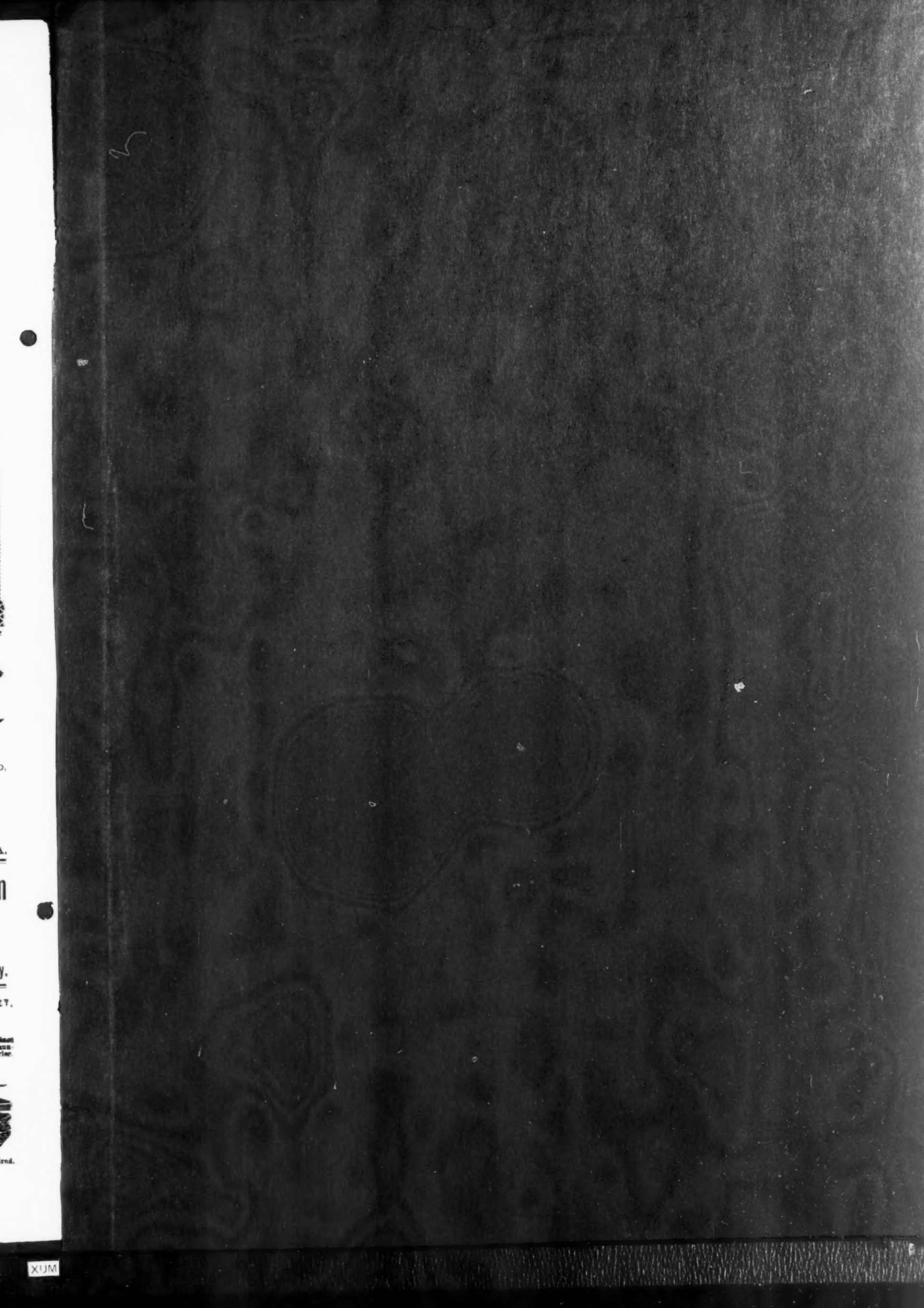
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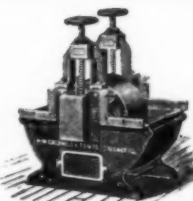


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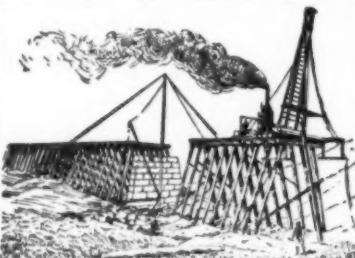
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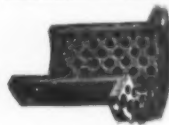
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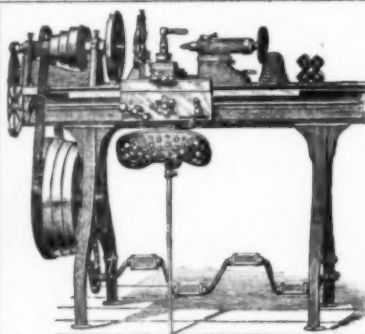


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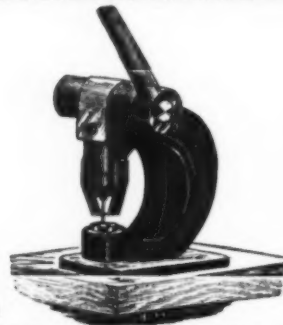
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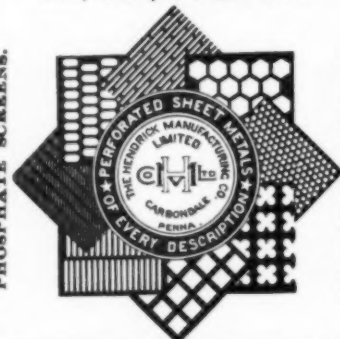
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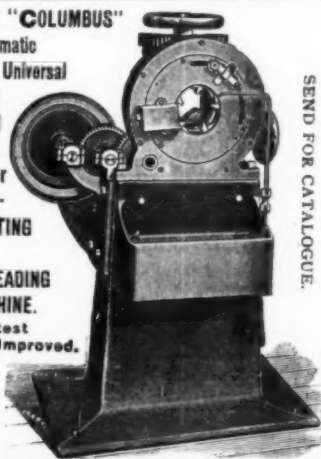
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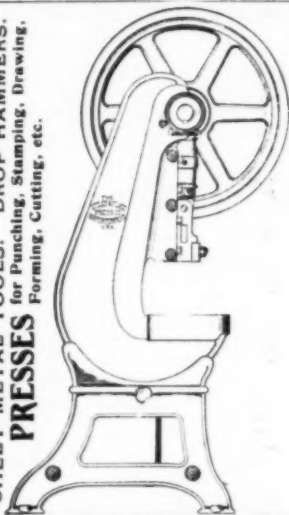


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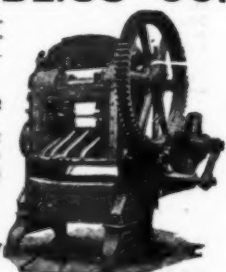
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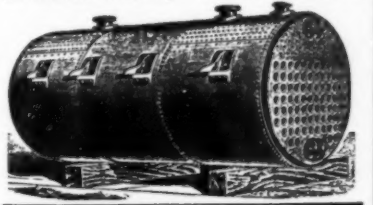
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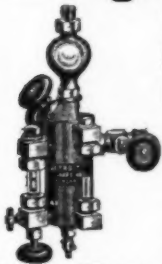
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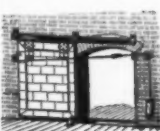
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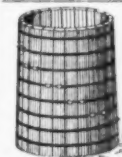
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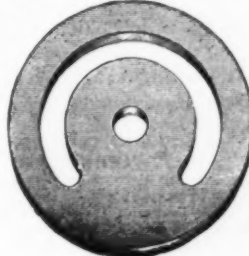
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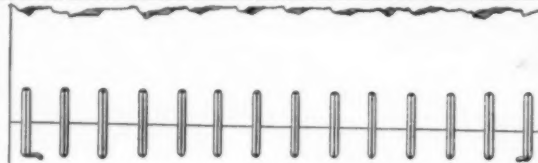
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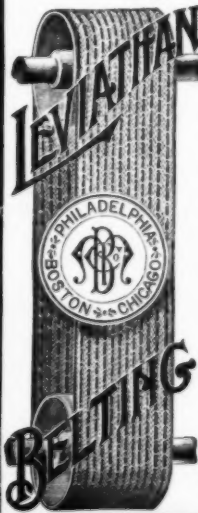
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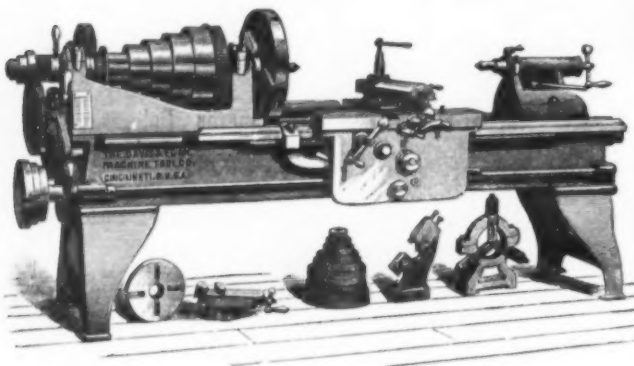
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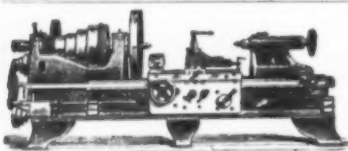


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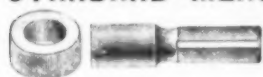
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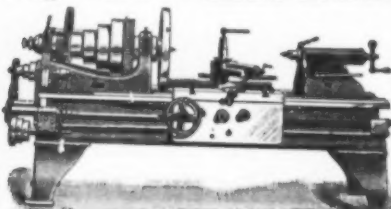
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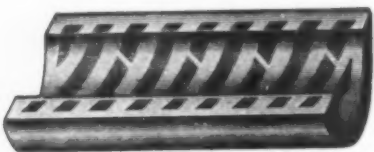


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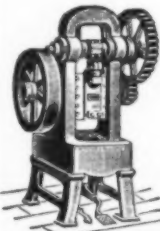


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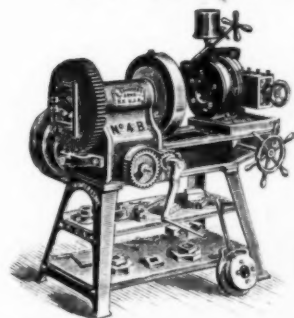
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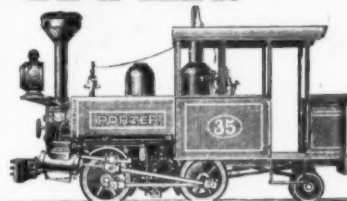
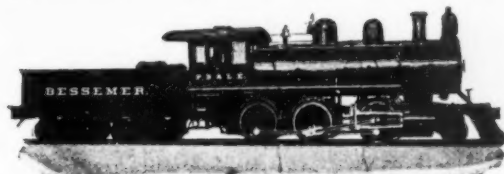
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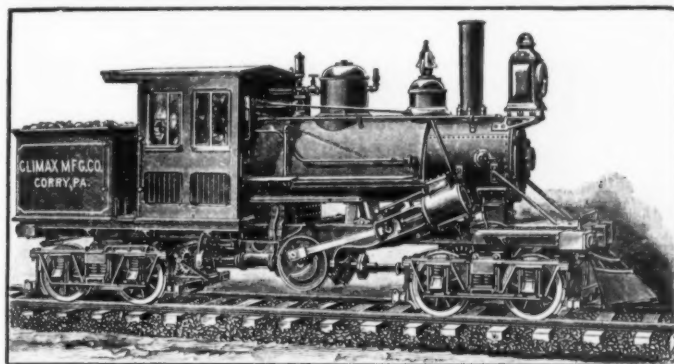
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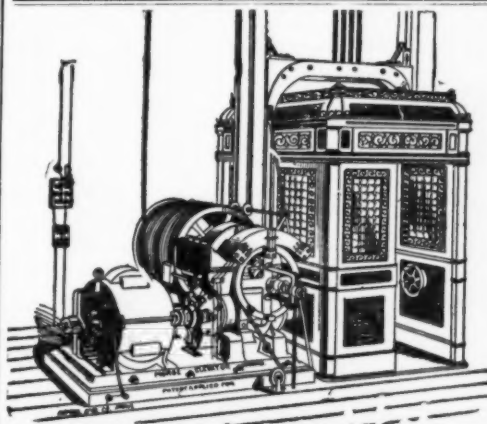
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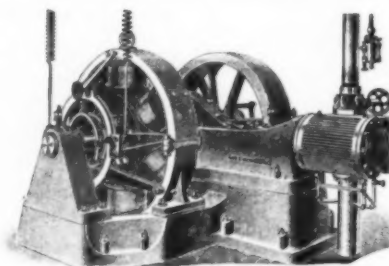
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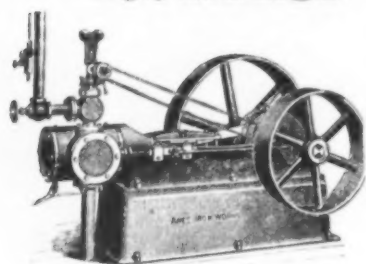
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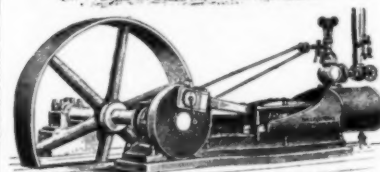
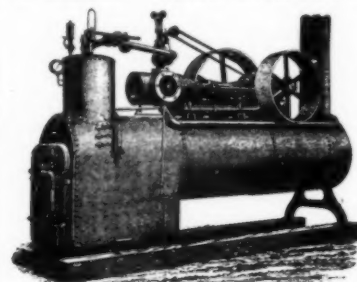
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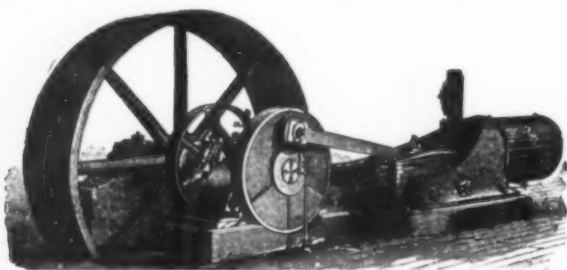
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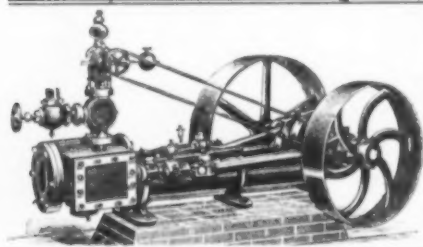
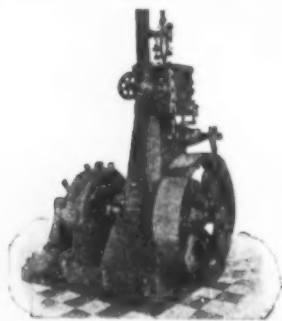
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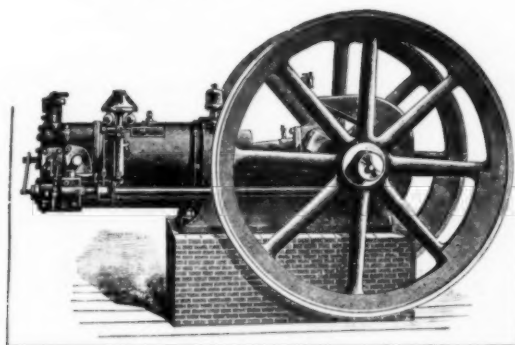
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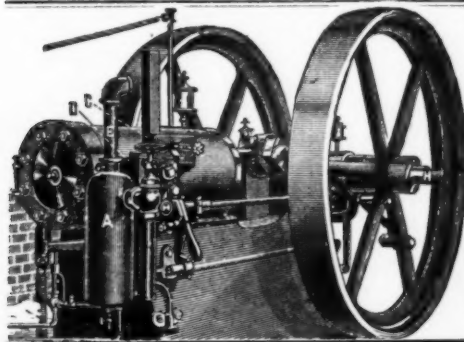
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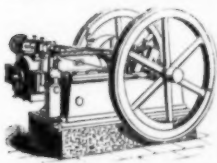
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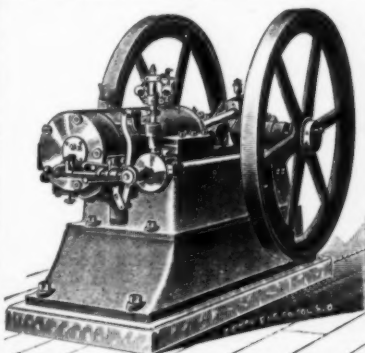
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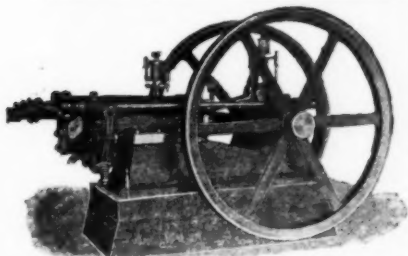
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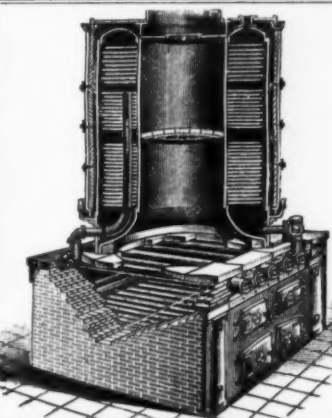
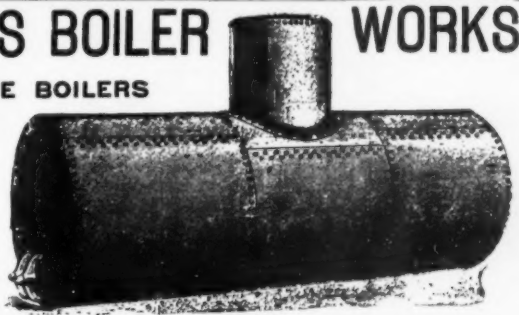
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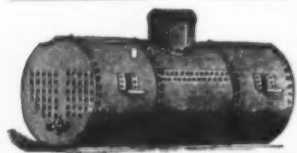
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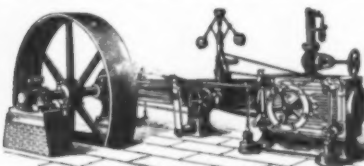


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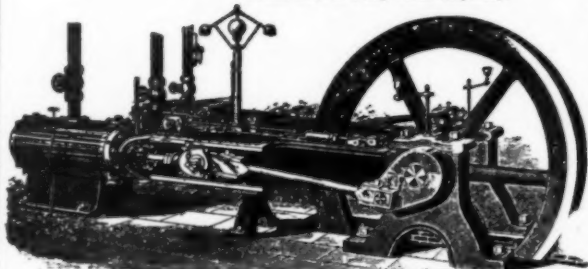
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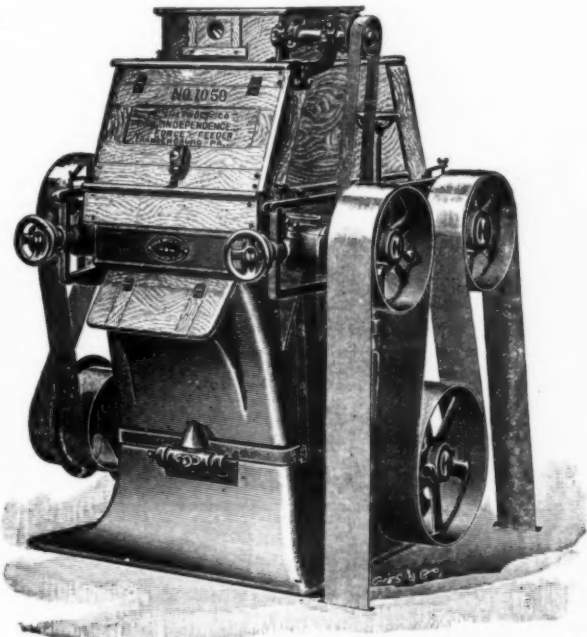
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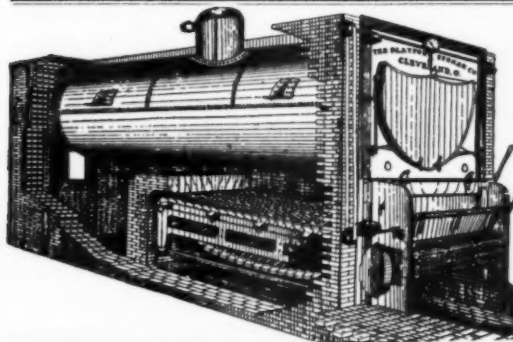
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Abolish smoke, to increase boiler capacity and to save fuel.

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To Burn with equal facility both anthracite and bituminous coal;

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To do this without throwing away the resulting heat by frequent opening of fire doors.

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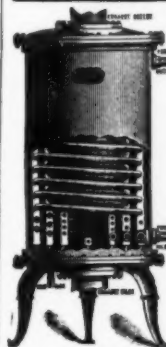
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Delivering Water to Boilers at 212° F.

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## Priestman Oil Engine Burns OIL, Not GASOLINE.

Safety, High Efficiency,  
Small Fuel Consumption,  
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Can be used for any purpose.

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## ROSS' REVERSIBLE BALL GAUGE COCK.

This gauge cock has two rubber strips, forming the valve seats. When one is worn out reverse the ball to the other seat.

The worn out rubber can then be taken out and a new one replaced ready for use.

We also manufacture a full line of superior brass globe valves, steam cocks, Ross' gate valves for gas and water, gauge cocks, lubricators.

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# Charleston, SOUTH CAROLINA.

This is a good time to start.

Room and work for

## \$100,000,000

Jetties completed by U. S. Government give channel 26 feet deep to the ocean. Harbor large and deep enough to float the combined navies of the world.

PERFECT CLIMATE.  
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New manufacturing enterprises exempt from municipal taxation for five years.

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now invested in manufactures as follows:

Class.	No.	Hands empl'd	Capital inv'd	Annual product.
Bag factories.....	2	35	150,000	475,000
Bagging factories.....	1	385	300,000	350,000
Basket and wireware.....	1	123	25,000	150,000
Ware factories.....	2	13	10,000	25,000
Basket & veneer wks.....	1	249	75,000	125,000
Breweries.....	1	100	107,000	300,000
Broom factories.....	1	10	2,040	6,000
Candy factories.....	10	60	100,000	325,000
Carriage & wagon wks.....	6	100	50,000	100,000
Cider and vinegar.....	3	15	15,000	35,000
Cigar factories.....	9	100	60,000	250,000
Cotton & wool picks.....	1	645	600,000	700,000
Cotton ties, etc.....	4	25	10,000	30,000
Envelope & box facty.....	1	53	10,000	75,000
Fertilizer works.....	12	1,400	5,325,000	4,253,000
Flour and grist mills.....	8	275	150,000	700,000
Foundries & iron wks.....	3	260	250,000	300,000
Job printing and.....	2	25	75,000	100,000
Knitting factories.....	8	180	35,000	450,000
Lead factories.....	1	90	24,000	40,000
Marble & granite wks.....	1	10	40,000	15,000
Mattress factories.....	5	60	40,000	75,000
Men's clothing.....	2	35	27,000	70,000
Oil refineries.....	11	90	60,000	250,000
Oil reprobinary estab mls.....	1	5	20,000	325,000
Rice mills.....	25	170	75,000	150,000
Saddlery & harness.....	2	35	40,000	100,000
Sail & awning factories.....	2	35	40,000	100,000
Saw and lumber mills.....	8	250	350,000	850,000
Ship and boat yards.....	3	70	75,000	175,000
Shoe factories.....	1	45	25,000	100,000
Soap and candle facty.....	1	15	25,000	60,000
Shed, etc.....	22	150	70,000	650,000
Underwear factories.....	3	150	100,000	175,000
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# WORTHINGTON STEAM PUMPS

WORTHINGTON  
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WATER METERS

JUST CHEAP POWDER AND FREE WATER MIXED

Makes a paint that is superior in many respects to any oil paint in the market. Weather-proof and Fireproof. A circular, to be had for the asking, will tell you all about it.

ALDEN SPEARE'S SONS &amp; CO., Paint Department, 369 Atlantic Avenue, Boston, Mass. New York. Chicago.

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Offices and Works—Water &amp; Tasker Sts.

Manufacturers of

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H. WM. DOPP &amp; SON,

MANUFACTURERS OF

Soap Makers' and Butchers' Machinery,

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Swing Foot Lever Soap Presses, Nos. 1 and 2. Combination Foot and Steam Power Soap Presses. Improved Soap Remelting Cutchers, either with or without Eight Horse-power Engine attached. Seamless Steam Jacket Kettles. Steamed Jacketed Toilet Soap Kettle, with Agitator (three different styles). Steam Jacketed Rendering and Refining Kettles. Steam Jacketed Kettles for Confectioners. Illustrated and Descriptive Catalogue on application.

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In Blind, Shutter and Gate Hinges, Gate Latches, Frame Axle Pulleys, No. 25 Niagara, No. 26 Star, No. 30 IXL, No. 60 Square End, No. 35 Acme solid case with markers, and the Gem Machine Pulley from 1 1/4 in. to 2 1/2 in.

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The American Balance Slide Valve

BEVEL PACKING RING

ABSOLUTELY STEAM TIGHT.

NO SPRINGS.

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15,000 Valves in use on Locomotives, Stationary and Marine Engines.

Descriptive Catalogue Free.

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"SAMSON" STEEL BELT HOOK.

SAMPLE SENT FREE.

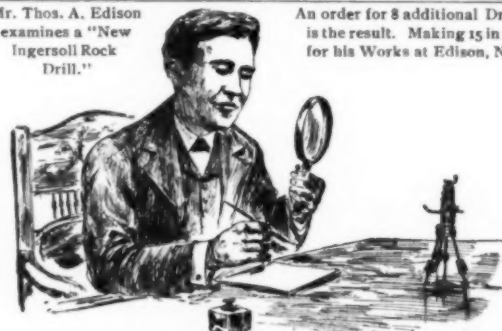
For all kinds of Belts—leather, cotton or rubber. Will neither cut nor pull out. FLEXIBLE, SMOOTH and NOISELESS RUNNING.

THE BEST FASTENER FOR OLD BELTS.

Samson Steel Belt Hook Co.

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An order for 8 additional Drills  
is the result. Making 15 in all,  
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Air Compressors—Rock Drills—Coal Cutters

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We Buy, Sell and Trade New and Second-hand Machinery.



# MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XXXIII. No. 5.  
WEEKLY.

BALTIMORE, FEBRUARY 25, 1898.

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BALTIMORE, FEBRUARY 25, 1898.

### For Industrial Infants.

In commenting upon the work of the public schools in Georgia, State School Commissioner G. R. Glenn made a clever play upon a well-known phrase by pleading for protection "for industrial infants." He said:

The resources in raw material in Georgia are absolutely boundless. This raw material ought to be worked up into product that the world wants, by our own people. We make yearly about 1,300,000 bales of cotton. We ought to spin up every bale of it, and we can do it, if we will train our own people to do it.

Instead of shipping our hardwoods and our iron and products of our mines somewhere else to have the stamp of somebody else's intelligence upon it, Georgia intelligence ought to be stamped upon every bit of this raw material. I think this proposition is true, that no State, no nation, no people will ever become a prosperous people and do nothing else than produce raw material. Here in Georgia we have got water-power enough, if converted into electricity, to not only spin up all the cotton, but would work up all the other raw material we have right here at home. When we become a manufacturing people, our farmers will prosper. The products of these farms will be wanted by the people who labor in the manufactures, and we will have not only a home demand for everything we can raise on the farms, but a home demand for everything we can make in our manufactures. If we can make our people intelligent enough to use all this raw material at home, we will cease to import everything and will have everything to export.

Such precepts as that cannot be too often uttered. And the child cannot begin to be trained too early in habits of industry and skill. There is a vast field of manufactures opening for the present generation of children of the South. Georgia and her sister States are preparing to smooth the way for a full development of that field. No better means can be adopted than a complete system of manual training leading to the higher schools of technology, so that the young men and young women of the next ten years may readily fall into their proper places as operatives or as directors of the work that will have to be done. The South's industrial army should be recruited only from the South's industrial infants.

### Co-operation in the Cotton Industry.

The Manufacturers' Record is presenting every week the means whereby New England cash capital and Southern natural capital may be brought together in co-operation advantageous to both. A short time ago we announced that the Manufacturers' Record would be sent weekly to every cotton manufacturer in the New England and Middle States not already regular readers of it, with a view to directing their attention to the magnificent opportunities in the South for escape from the drawbacks and irritations of New England.

We are gratified at the results already attained. There is an intense interest in Southern possibilities among New Englanders, and not a day passes without an indication from some enterprising Southern community of its purpose to give incoming capital every reasonable inducement. This work of sending the Manufacturers' Record to the entire cotton-mill interests of the East is in furtherance of our determination—in line with our policy of more than fifteen years—to be the medium for attracting to the South the influences that will aid in its full development. We already find great interest aroused among our New England readers, and in this issue we publish a number of letters from leading manufacturers admitting that the South has very great advantages for this industry.

### Moss-Grown Oratory.

Representative Landis, in a recent speech in Boston, gave an illustration of the ease with which a man a generation behind the times may be sent to Congress from Indiana. In the first place, he showed that he still believed that the burden of a political oration by a man of his section must be an assault upon the South. That used to be the case. But most of the orators of that school are senile or in their graves. In the second place, Mr. Landis demonstrated that he had been enjoying a Rip Van Winkle slumber. He has not kept abreast of facts. For instance, he said:

The Southern agriculturist knows little else than cotton. If he would prosper he must read. If he would get out of the rut he must experiment. Cotton, cotton, cotton, year after year, exhausts the soil, and that portion of the crop that does not go for labor goes for fertilizer.

Dismissing the fact that, were it not for "cotton, cotton, cotton, year after year," the North would not be enjoying its strength of today, nor would the middle West be filled with the descendants of New Englanders crowded from their homes by the influx of foreign laborers, a few points about the agricultural South may serve to illuminate the dense darkness of Mr. Landis's ignorance.

Fourteen Southern States raised in 1896 of crops common to the whole country 44,776,253 bushels of wheat, 453,431,150 bushels of corn, 70,012,742 bushels of oats, 3,760,167 tons of hay, 20,959,403 bushels of potatoes, 320,725,310 pounds of tobacco and 38,530,181 pounds of wool, beside sugar and molasses.

The live stock exhibit, in comparison with that of the rest of the country, was as follows:

	South.	Elsewhere.
Horses .....	3,525,322	11,598,834
Mules .....	1,534,410	744,536
Milk cows .....	3,763,046	12,374,540
Cattle .....	9,908,483	22,176,928
Swine .....	19,075,262	23,767,488
Sheep .....	6,584,704	31,714,079

Moreover, the figures of the census of 1890 are illuminating even at this late day. In that year the South grew \$6,484,660 worth of truck, 27,793,405 bushels of peaches (nearly 80 per cent. of the whole crop), 46,948,398 bushels of apples (more than 32 per cent. of the whole), 21,534 tons of grapes, 311,470 bushels of cherries, 563,246 bushels of pears, 721,069 bushels of plums, nearly half the nuts and semi-tropical fruits, 38 per cent. of the crop of peas and beans, nearly all the peanuts, all the rice, beside poultry, eggs and dairy products. The total value of all agricultural products in the South was 31 per cent. of that of the whole country, while the value per acre of all farm products in the South was \$7.18, and in the rest of the country \$6.87.

That the people have been deluded in the choice of some of their representatives—a complaint made by Mr. Landis—is a statement applying not to the South alone. It is sad to reflect upon the degree of intelligence of a people who would be content to be represented by a man so far behind the times as Mr. Landis shows himself to be in his moss-grown oratory. It may be that they are not content, and that discontent may explain the steady movement of men of Indiana and neighboring States to the South.

Perhaps we misjudge Mr. Landis. His speech may have been an attempt to scare others against the South or to keep up his own courage. In either event, he has paid a back-handed compliment to his constituents which they will not fail to return at the proper time.

North Carolina's railroad commission is maintaining its reputation as a warning to the people of the country against entrusting powers over economic factors to politicians and men ignorant of practical details or blind to them. In the face of facts to the contrary, convincing to reason, the commission has decided that passenger rates on the railroads are too high. It

has reduced them three-quarters of a cent a mile, so that they will be two and one-half cents a mile, and has thus made more court business for the litigation-ridden State.

### Menacing the Country's Peace

One of the measures most dangerous to the peace of the country ever introduced into Congress is now being considered by the judiciary committee of the House of Representatives. It is a resolution providing for the submission of a constitutional amendment authorizing Congress to regulate the hours of labor in the United States. It is confessedly an attempt to repair the artificial power of New England to compete industrially against the natural ability of other parts of the country. In that it is an effort to turn economic conditions into a lever for the stirring up of political sectionalism.

Business interests of the North, as well as elsewhere, are wearied of sectional strife, with its paralyzing effects upon trade and commerce, and its more or less extended interruption of friendly relations, upon which the prosperity of the country depends. But in the proposed measure they are brought face to face with an evil even greater than sectionalism.

If there was the slightest chance of the adoption of the proposed amendment, it might be excused upon the ground of desperation, though nothing could justify it in the mind of a man knowing no section. But as this chance does not exist, the real purpose of the measure must be sought. It is not densely concealed. No one doubts that the Congress may propose the amendment. But no one expects its ratification. Still a party will be provided with campaign material for a congressional and presidential election. And that is just what the proposed amendment seems to be intended for. Labor has only to think for a moment to see through its hypocrisy, for its promoters are the very same people who but recently reduced the wages of cotton operatives, and the resolution was introduced almost on the day that the reduction of wages went into effect. If men who had been willing to reduce their dividends in order to raise wages had suggested such a measure, labor would have reason to have more confidence in it. Labor of the country, when it is told that it is desired to place the whole country upon the level of Massachusetts, will naturally ask whether such national legislation is not likely to place all labor in the United States, in relation to labor of other countries, in exactly the same predicament in which legislation in Massachusetts has placed labor of that State in its relation to labor of other States.

The injection of the subject into a political campaign cannot fail to intensify whatever antagonism between labor and capital has been sedulously cultivated by demagogues for fifty years. That is a point for earnest con-

sideration on the part of all conservative men, whether they are employers or employees; whether they live North, South, East or West. And the same conservatives will not take long to decide the fate of politicians who not only dare to inaugurate such a useless upheaval of business and industrial enterprises, but who also deliberately seek to commit the country to the theory of the right of the general government to override the right of private contract. The principle is the same, whether it prevents a laborer from taking employment upon his own terms or authorizes a man to pay a debt in a depreciated currency.

The vote of 1896 was supposed to have settled that principle in one connection, and it will go hard with any party that dares to attempt to reverse that decision in another connection.

The submission of the proposed amendment can be compared only to the striking of a match in a powder magazine.

### Balm for the North.

I wish to touch one other problem that has got to be faced in a very few years—that is, colored help in the cotton mills South. This will come as sure as day succeeds night, and while it may hurt us still more at first, it is the only bright spot I see in the Southern cotton manufacturing situation. I say bright spot, because colored help will work for so much less wages than the Southern whites; that the whites will organize and give the manufacturers trouble wherever they are employed.

This extract from a letter of a Northern cotton mill agent in the Textile World is one of the best exhibitions of nude human nature that has ever been offered to the public. It proves that it only needs desperation to crack the veneering of the centuries and reveal the real personality which ordinarily manages to conceal itself. But it is well that more Northerners have not the nerve to state that the only bright spot for them in the Southern cotton manufacturing situation is the possibility of an interruption of the pleasant relations of Southern millmen and operatives. Else Mr. Dingley would have greater difficulty than ever in his philanthropic talk of seeking to persuade Southern men to cripple themselves for the relief of Northern mill owners.

We regret, however, the necessity of checking the fiendish glee of the Northern cotton mill agent in his prognostication about the South. Reason is against its fulfillment. Forty or fifty years ago a favorite argument of demagogues and employers dealing with the discontented labor element was that the responsibility was upon the slave system, and that slave labor was a hindrance to free labor. Those identical words may not have been employed, but the insinuation was iterated and reiterated until in the consequent struggle slave labor was abolished.

It would have surprised Northern labor in 1860 to know that slave labor was in reality not the cheap labor that it was represented to be, for in the total expense or wage must be included the cost of maintaining slaves until they could work and after they had ceased to be efficient. It may surprise the laborers of today to know that the cheap black labor given to the South when its whites and blacks were simultaneously emancipated is likely to be an important element in its industrial progress. In fact, every indication points to a remarkable belief that the freedman and his descendants are to fix the rate of labor's wage in this country. As

the bulk of that class is in the South, that section will derive the most benefit.

The Northern cotton mill agent, in hoping for trouble in the South in a contest between white and black labor, evidently banks upon the treatment of black labor in his own section. Nowhere in the world has the black man better opportunities for employment in industrial life than in the South. By no one would he be subjected to greater hardships as a wage-earner, if he had the chance to become one, than by members of the class represented by the Northern cotton mill agent. Almost the only places in the South where there has been a clash between white and black labor are where the New England flatterer and agitator has left his trail. There will be room in the South for the employment of all available labor there, whether white or black, with no occasion for conflict. And the wages will be lower for the natural reason that the cost of living is lower. All the strikes of New England operatives—and they have been striking for half a century—will not take that advantage from the South. On the other hand, strikes in the North will send industries to the South, where they will no longer be handicapped by unnatural conditions, and where the New England element will be the firmest in resisting successfully movements that would impair the efficiency of their undertakings.

We suggest that, in the meantime, the Northern agent try the experiment of supplanting strikers in New England with negroes. Removal of the negroes to Northern mills at the high rates supposed to prevail there would do much to equalize wages North and South. It is not likely to be attempted, though. It would silence, forever, the agitation of that dangerous class in the North, for which the Northern cotton mill agent seems to be the present spokesman, which hopes and plots continually for injury to the South in a conflict of races.

### Georgia's Textile School.

The Alumni Association of the Georgia School of Technology has taken in hand the task of raising \$10,000 necessary to make available the \$10,000 appropriated by the legislature for the establishment of a textile department in the school. Mr. George Parrott, one of the trustees, has given \$1000, and members of the faculty have subscribed sums ranging from \$10 to \$100, and it is hoped to raise the remainder among the alumni and students.

Since the unfortunate action of the Mississippi legislature regarding a textile school for that State, and the apparent diminution elsewhere of live interest in the subject, Georgia has now an opportunity which it should not fail to seize and turn to the best advantage. The necessity for textile training in the South as provision for the future is becoming more and more pronounced. With the enlargement of the cotton industry there will be an increased demand for skilled superintendents, and Southerners should be prepared to meet that demand.

The State that first establishes on a firm basis a thoroughly equipped textile school is destined to lead in the movement that is already doing so much for the South. Georgians should be willing to invest not only \$10,000, but \$25,000, or more, if necessary, to make its proposed school a success. Here is offered a great chance to give

practical proof of a desire to encourage manufactures in that State. A check for \$1000 for the textile school will accomplish more than 10,000 pages of resolutions in favor of industries and 100,000 reams of rhetoric reviewing the past or dilating upon present resources.

The true policy is to set about realizing possibilities by preparing Georgians for their obvious advantages. The textile school will help to do this. The sooner it is started the better for Georgia.

### The South to the Front.

It is encouraging to note the interest that is now being taken in manufacturing industries throughout the entire South. This is something that the people of the South have long felt the need of. It has been a ruinous policy for the Southern States to stand off and protest against the injustice of the protective tariff of the North, instead of manufacturing themselves, and thus divide the fruits. It is claimed that the North is becoming alarmed at the sudden waking up of the South in this respect, and that many Northern capitalists are preparing to invest largely in Southern manufacturing enterprises. Whenever the hum of machinery in motion can be heard all over our fair land an era of prosperity will dawn that has never even been dreamed of. We have already been too long a dependent people—dependent upon other sections to manufacture our raw material that can be done equally as well and at much less cost here at home. But affairs are now changing, and we are truly grateful for it.—Brenham (Texas) Banner.

These are wise words. Let the South make the most of its opportunity, develop every line of industry to its utmost ability, and then we shall see profitable employment for all its people, diversified agriculture, a home market for its farmers and general prosperity everywhere.

Mr. T. W. Pratt, president of the West Huntsville Cotton Mills Co., of Huntsville, Ala., in a letter published in this week's issue referring to the round-bale press which he established at that point last year, says:

We have put in our order for machinery to double the capacity of our gin and press putting out the round bales of cotton. With our new machinery next fall we shall be able to take care of a bale of cotton every five minutes. Our experience with the round bale this season has been such that we are satisfied it is the coming bale and will be almost universally adopted by the cotton raisers of the South. In this neighborhood we saved the farmers large sums of money last season, as we cut the price of ginning, covering and compressing to \$1 per bale. They have heretofore been paying \$2.75 per bale. We have also paid them one-eighth cent per pound premium on their cotton.

These are interesting statements coming from a man of Mr. Pratt's prominence in cotton handling and cotton-manufacturing circles.

The Texas Trade Review, of Dallas, has two suggestions in its last issue which are worthy of consideration everywhere throughout the South. They are in harmony with what the Manufacturers' Record has for years preached. The Review says:

Less politics and more business is the programme the Texas people have mapped out for the pushing of the Lone Star to the very front.

Let other States do what they may to threaten the investor or the immigrant, to retard or depress citizenry. Texas can afford nothing illiberal, inequitable, unfair, ungenerous. She must be as broad in her views and conduct as she is in physical area, as energetic in her ways as the soils that sprout her products.

That is good doctrine for the whole South. If other sections wish to fight capital and retard development, it is their own affair; they are the ones to lose; but let the South be the one place

where capital will feel absolutely secure, and then we shall see a great rush of investors here and prosperity for all classes.

The Marion Steam Shovel Co., Marion, Ohio, in renewing its advertising contract, says: "The Manufacturers' Record has been satisfactory to us; in fact, it is one of the best advertising mediums we have. We are exceedingly busy at present. Last month was nearly one-third larger than the best previous month in the history of our company."

### Grasses and Forage Crops in the South

The March number of the Southern Farm Magazine (formerly the Southern States Farm Magazine) is taken up largely with a discussion of grasses in the South. The magazine, in addition to such regular features as might be looked for in a high-class agricultural periodical, takes up each month for elaborate treatment some one comprehensive topic. The subject for January was "The Negro As an Agricultural Laborer," and for February "Southern Soils and Their Treatment." The subject discussed in the March number is one of the most important that could be brought before Southern farmers. The South needs imperatively to raise more live stock and to improve its breeds of stock. The very foundation of stock breeding is grass. The South needs to adopt measures to maintain soil fertility and to restore depleted soils. The only way to this end is to cultivate the grasses.

In this number Hon. Charles W. Dabney, in an article on "Our Farm Animals and Their Food," shows by a very graphic presentation of facts and statistics how far short the South yet falls of raising enough grain and forage for even its present live stock; and this notwithstanding, as is abundantly demonstrated in other articles, that "no country presents better opportunities for making permanent pastures, and nowhere do they yield such uniformly great profits as in the South."

Col. J. B. Killebrew, under the title "Some Southern Grasses," describes the grasses best suited to the climate and soils of the South, and tells how they should be cultivated. Colonel Killebrew has not only the amplest scientific knowledge of the subject, but, as the owner of a splendid farm, which he has always made highly profitable, he has had a long experience in dealing practically with all questions pertaining to forage.

"Forage Crops of Western North Carolina" is the title of an article by Mr. Geo. F. Weston, superintendent of the Vanderbilt stock farms at Biltmore, N. C., in which the forage methods pursued on this estate are described.

"A Grass Farm" is the title of an article by Mr. John R. Fain, who bought an old hill farm and is now making it support a large herd of cows and cattle.

But probably the most interesting feature of this grass discussion is a large number of letters from successful and prosperous Southern farmers and stock breeders giving their experience in dealing with the question of forage.

This number of the magazine is even richer than usual in all its regular features. It is illustrated with a number of fine half-tone engravings of grass and stock farms in the South.

The Southern Farm Magazine is published by the Manufacturers' Record Publishing Co., Baltimore, Md. One dollar a year.

Experts assert that only a little capital and enterprise are needed to develop the oyster industry of Louisiana to a point where it would yield magnificent results.



## NEW ENGLAND AND THE SOUTH.

### Prospects of a Union of Cotton Mill Capital of the Former with Natural Advantages of the Latter.

In response to a communication intended to sound the sentiment of New Englanders interested in the textile industry toward investments in the South, the Manufacturers' Record has received a number of letters from cotton-mill owners or agents, manufacturers of mill supplies and others, which are an interesting and valuable contribution to the line of discussion now occupying the attention of New England and the South.

Nearly all the letters recognize the superior natural advantages of the South. Many of them deal with the question of restrictive legislation as an impediment to rapid investments in cotton mills. The evils of exaggerated legislation in New England—evils for the employe as well as for the employer—are clearly shown, and while fear is expressed that there is a tendency toward such legislation in parts of the South, the warning is given in time to prevent it, and the assertion is made that even should there be an equalization of hours of labor and wages, the South would still have the advantage over New England. From among the many letters received, a number representative of all shades of opinion on the subject have been selected for publication as follows:

#### Spinning Fine Numbers.

Wm. C. Pierce, president Elizabeth Mills, Providence, R. I.:

"I am satisfied that the South today has many advantages over New England for cotton-manufacturing purposes. We are in receipt this day of a sample of No. 100 yarn, single, spun in a North Carolina mill, which we enclose for your inspection. This is in direct contradiction to many statements which have been made that fine numbers cannot be spun in the South owing to the climate and lack of skilled labor.

"As the advantages of the South for the manufacture of textiles have been generally acknowledged by the mill-owners of New England, it is reasonable to assume there will be more general investment of New England money in Southern mills, especially those well equipped with modern machinery.

"There is no doubt but the enactment of restrictive laws against corporations at this time would be a great hindrance to the development of the South.

"Equitable bankruptcy laws would do much toward establishing a demand for good Southern securities."

#### Sensitiveness of Capital.

Arnold B. Sanford, Boston, Mass.:

"Nothing is so sensitive as capital, and anything that would interfere with its successful operation would certainly retard its investment, not only in the Southern States, but in our own New England States, where we have had altogether too much legislation for our benefit. This has been a very serious evil for us to contend with here in New England, and the operatives, as well as the manufacturer and investor of capital, are now alive to this condition which militates against our manufacturing industry here. Certainly any agitation of this character in the Southern States would restrict investment of capital by outsiders, but if it were possible to have the assurance of freedom from restrictive laws and laws of a populist character against corporations in your Southern States, there is no doubt, in my mind, but that it would draw capital for investment in cotton manufacturing in the cot-

ton States from all over our country. The moment there is any doubt as to the policy to be pursued or adopted by any State regarding industrial enterprises, which would in any way be likely to retard or handicap them, you can very readily make up your mind that manufacturers will be very slow to take any risks in that section regarding investments of capital."

#### Effects of Agitation.

O. W. Stites, superintendent, Hoosick Falls, N. Y.:

"I have been through the South, and spent some months in different sections. Your advantage for not only cotton manufactures, but many others, are great, and if protected from restrictive legislation in that section the cotton industrial interests, with all others, would be greatly enhanced. The agitation in the South has had a tendency to check in some instances, and in others the cause of abandoning contemplated plans to erect manufacturing plants there. If the South could give absolute assurance of protection from labor laws and laws of a populist character against corporations there would be a great increase in the investment of New England money in Southern enterprises, and especially the cotton industries, and many of your undeveloped resources would have been utilized in various manufactures only for this."

#### The South Not Alone.

Geo. Otis Draper, secretary the Draper Co., Hopedale, Mass.:

"We are, of course, more interested in Southern cotton mills as consumers of our products than as investors in their property, and such investments as we may have made have been governed by a knowledge of the equipment of the mill rather than other considerations.

"I think there is no question but that Northern investors have had apprehensions as to possible legislative action in certain Southern States, and that there would be more confidence if they could be assured that the populist movement was on the wane. Capital will certainly never flow into unfriendly localities. The South, however, is certainly not alone in being burdened with an element who consider manufacturers as plunderers and oppressors."

#### Time May Equalize.

Arnold Schale, Warren Manufacturing Co., Warren, R. I.:

"I do not believe that fear of unfavorable legislation against corporations in the South has, so far, had anything to do with restricting the investment of outside capital there. I don't believe that such fear exists to any extent in the North, although personally I believe the advantages which you now undoubtedly possess are only temporary, perhaps for ten to twenty years, just about in proportion as your industries expand. Should they receive any very marked impulse, so that native help would not be sufficient to fill the places in your mills, the labor organizers and politicians would soon draw the help and small tradesmen into the whirlpool of politics and change the aspect of things materially. The slower you grow, industrially, the longer will be the day off when the labor agitator and politician who depends on the vote of the masses will find a fruitful field, and the longer you will be able to enjoy the advantages of favorable legislation. But in time, I

feel, things will equalize themselves, and your hours of labor and rates of wages will gradually approach to New England conditions. I believe this is already being felt in centers where manufacturing is more concentrated.

"Generally speaking, both in the North and South, large centers of manufacturing are a disadvantage, are the causes of labor organizations, which work in with politics, and I believe it would be of much more advantage to the country at large if any particular industry (here and South) would find suitable locations, where help can be found, and utilize the labor of the country where now hundreds and thousands are kept in almost forced idleness, instead of trying to foster large industrial centers and draw the worker away from farm or home into the maelstrom of unionism, socialism and anarchism, which are so sadly raising trouble in large centers in the North.

"As I said before, I am not aware that anything that has been done in the South by your people has had any influence from keeping investors away. My impression is that the better class of people in the South are held in the highest of esteem, and I hear their hospitality often spoken of. But the principal cause of the fact that not more money has found its way down South is the general feeling of uncertainty about the prospects of the industries, which at the present time seem to be producing more than the country can take at a paying price. I do not see how you or anyone can promise absolute non-interference by your governments into the conditions of labor and factory legislation; this is a matter that time will bring about in spite of all of us, accordingly as the industries are placed.

"I do not believe in restricting immigration. I believe that the country is large enough for all of us, and a great many more. Traveling out West one can see how much more room there is for any that want to work. This restriction of immigration is a move only to please labor organizations, and propounded by men aspiring for popular votes. Even the educational test is a farce. There are more and the worst criminals among us, who can read and write, than among the really illiterate. Of course, all such agitations, the populist ideas, etc., make capital pause and makes the man with a little savings more cautious."

#### Effect of Trades Unions.

Samuel Webber, Charlestown, N. H.:

"I have been somewhat familiar with cotton manufacturing at the South since 1880, when I served as one of the judges on machinery at Atlanta, and afterward visited some of the large mills. Since then I have been South several times, am quite familiar with the mills at Augusta and that region, as they were a few years ago, and have been well posted by my nephew, Mr. C. K. Oliver, as to the situation at Columbia, S. C. I have also examined the mills at Columbus, Ga., and New Orleans. In answer to your first question, I will say that I do think the fear of populist and other unfavorable legislation has deterred Northern capital from investment at the South in the past, but that, suffering from the effects of such legislation at the North as is brought upon them by that curse to industry, the trades unions, which seek to make a procrustean bed for the workman, and trim down the abilities of the best men, and their consequent production, to the limits of the laziest and most ignorant of the class, solely that more men may be employed, no matter how inefficient their labor, or how little they accomplish, Northern men are now turning more to the South as a desirable field

in which to invest capital. The warm Southern climate was at one time a bugbear, but my own observation is, that it is far better suited to cotton-spinning than the cold electrical atmosphere of our Northern winters, where 'humidifiers' are a necessity. The South has also, for the present at least, the advantage of cheaper labor, which is made available by the milder climate and the less cost of living, and will consequently remain so to a certain extent, though I deprecate the employment of such young children as is reported by the committee of the Arkwright Club, and the longer hours of labor. It was these very abuses which brought on the stringent labor laws of England and the Northern States, and has aided materially to build up the trade unions, which are now becoming more tyrannical than the masters ever were. If we could have a uniform ten hours for all the States, and let it alone at that, for ten hours' work in a cotton mill is not severe labor, and not to be compared with either the time or the toil required in many outside avocations, notably agriculture, with a uniform bankrupt law, as suggested by Mr. Lovering, I think large volumes of Northern capital would be attracted to the South. I believe this answers the question, but I think there is another point on which I may say a word. There is just now a panic among the mills at the North on account of 'Southern competition,' but I think the cause of the trouble with the Northern mills are many and widespread. England is in a similar state of suffering, and her troubles are attributed to the East Indian mills. The truth is, that both India and Japan are supplying themselves with many goods which they formerly imported, and the Chinese market was injured by her war with Japan, but our own home market is suffering from the reduced incomes of the great mass of the people, due to no small extent to the Wilson tariff (I will not add Senator Gorman's name to it, for except for him it would have been much worse than it was), which threw thousands out of employment and cut off their purchases of cloth. I hope another year will change the condition."

#### Conditions Under Which Larger Investments Would Be Made South.

Leontine Lincoln, Kilburn, Lincoln & Co., Fall River, Mass.:

"As the result of close observation during many visits South, confidential talks with manufacturers there, comparison of conditions of manufacture North and South, I am satisfied that the South has great present advantages, and that these are principally in the low cost of labor, and in the intelligence and skill of that labor. I do not find, for instance in the Piedmont section, that the cost of cotton or coal is, on a year's average, less than in the North, while in regard to supplies our best Northern mills make a better showing by nearly one cent a pound than the best Southern mills. These items, of course, will be reduced with experience. I look for an advance in the labor cost South from time to time. I think that compulsory school laws, which we shall all welcome, are much nearer adoption than public opinion has generally conceded. I believe that within a short time Southern mills will adopt a shorter working schedule. I do not expect this change to come immediately by legislative enactment. Custom often fixes the hours of labor as arbitrarily as law, and I already know of mills that can legally run seventy-two hours per week which do not run over sixty-six. The two sections are coming nearer together on these points in the near future. But until the present large supply of intelli-

gent labor, working at rates at least 25 per cent. under the Northern schedule, is exhausted, the Southern mills should be inviting places for the investment of capital. I can say, however, that in my opinion the lack of a national bankruptcy law, and the fear of hostile legislation in regard to corporations, do deter capital from investing in Southern enterprises. For instance, when I was in North Carolina last winter, the suggestion was made that the corporation law of the State should be changed so that stockholders should be liable for the indebtedness of the company up to an amount equal to their stock in the concern. This mere suggestion greatly disturbed investors. Political economists say that 2 per cent. represents the timidity of capital in changing from a certain to an experimental investment. When we see Southern investments, which will pay 4 per cent. or 5 per cent. above the average investment, offered without purchasers, it is easy to measure the fear of Northern capital in taking up these new investments. I should certainly say that 'if it were possible to have an absolute assurance of freedom from restrictive laws and laws of a populist character against corporations, there would be a more general investment of New England money in Southern enterprises.'

#### Curse of Demagogues.

Colin C. Bell, president Laminar Fiber Co., North Cambridge, Mass.:

"On general principles there can be no doubt that the primary necessity in inducing investment is security from restrictive legislation. It must act unfavorably on the minds of would-be investors to know that there was a feeling of antagonism to the established order of business, and a liability of sudden and unlooked-for legislative changes. I regard the constant interference of local legislation, both here and in other sections of the country, in commercial affairs as one of the great evils of the day. It has come about that every man that has returned to a house of assembly goes there with a scheme in his pocket which he regards as a nostrum for all evils of the body commercial, and in consequence of this there is a decided feeling of insecurity in the minds of capitalists, as well as a hesitation to enter into a permanent investment in the nature of a manufacturing concern. Unquestionably the late presidential election, showing that a very large percentage of the population throughout the country was in favor of a scheme or plan for partial repudiation, cannot be considered as an inducement to investors. We know that this was largely the outcome of a feeling of desperation at the prevailing hard times. The farmers had had several bad years in which they lost money. Their debts were being pressed against them, and it is fair to assume that they thought the silver idea would make the payment of these debts easier. In the sections of the country where this feeling prevailed more extensively than others it would have to be borne in mind by would-be investors, and unquestionably other parts of the country, where there seemed to be a sounder appreciation of fair play, would be likely to receive more favorable consideration, even if the immediate prospects for profit were not so great.

"I do not think that there is any great prejudice against the South as a whole for a field of investment, and so far as I personally am concerned I have sufficient confidence in the sound sense and honesty of the community to believe that with the laws of property, the rights of investors will always be respected. There are many things in the investment of money and the employment of labor that un-

doubtedly interfere with social development as we would all like to see it, but rash and unconsidered methods will only result in making the conditions worse instead of better, and I fear that it would be a long time before the dreams of our socialistic reformers will be even nearly carried out."

#### Mistakes of the North in Labor Legislation.

Lewis R. Speare, Alden Speare's Sons & Co., Boston, Mass.:

"I have had considerable to do with the manufacturing interests of the North, and have felt fully the force of the restrictive legislation in the Northern section of the country. Southern mills in which we are interested have secured more or less success largely from the fact that the class of legislation referred to in the North does not, at the present time, exist in the South.

"I consider that our Northern States are making great mistakes in the class of legislation by which they have hampered the development of their manufacturing interests. While labor should be protected to the fullest extent, it is equally true that capital has its rights, and that labor only defeats its own ends when the laws of the State are so restrictive that factories are obliged to move to other States where the laws are more favorable. As a matter of fact, many of the labor laws of Massachusetts work directly against the labor interests, and so far as the laborers themselves are concerned, they would be very glad to have them changed. This is particularly true of special industries.

"The South has obtained quite a start in the manufacturing of cotton and other goods, largely on account of their freedom from restrictive legislation, and it is undoubtedly a fact that the South has not been more rapidly developed in this line from the fear that objectionable legislation in this line will be enacted.

"In my opinion, it is undoubtedly true that could Northern capital have the assurance of freedom from restrictive labor laws which have made it almost impossible to carry on manufacturing business in many States of the North, there would be a large increase in the investment of Northern capital in Southern enterprises.

"While, personally, I would much prefer to see our own laws amended so that manufacturers would have the opportunity to build their new works and increase their business in the North, I believe that with the laws as they are and the natural advantages of the South, capital will be freely spent in that section of our country to the benefit of the whole nation, provided they can be assured that restrictive laws against labor and corporations will not be enacted."

#### Expecting Trouble.

Walter H. Langshaw, superintendent Dartmouth Manufacturing Corporation, New Bedford, Mass.:

"The South has advantages for the manufacturing of coarse goods—1st, is the amount of labor that for years has not been utilized, consisting largely of members of families in country districts that are willing and glad to obtain work at small wages; 2d, the lower cost of living in the South; 3d, more hours allowed for a week's work and the privilege of running night as well as day. Nevertheless I am inclined to the opinion that the advantage over the North is but temporary, from the fact that as the labor becomes more skilled and has developed the tastes and ideas that come from an increased income, they will become as clamorous for long dollars and short hours as the laborers of the North. The more rapid and central the increase of spindles takes place the quicker the labor

will become organized to a sufficient degree to have its effect on legislation.

"The reason that there has been so little labor trouble in the South is due to the facts mentioned above, and also that nearly all the mills erected thus far have been scattered about the country to a degree that retards the development of labor organizations. One has only to review the situation in the North to realize that labor troubles invariably start and finish in places where there are many industries of one kind. But while this is to the disadvantage of said localities, it is modified to a large extent by the superior skill that is attained by the opportunity offered for a freer exchange of ideas and means to develop them.

"After considering the above conditions, I am inclined to the opinion that any further increase in the South is bound to bring the manufacturers of the South in contact with the same labor troubles that exist in the North, without the benefit of the advantages that come from long association with the business, and that any material increase of mills in the South will result in a lower average profit per spindle in the mills in that section."

#### Southern Investments Inevitable Unless Retarded by Unwise Laws.

Henry F. Harris, treasurer West Boylston Manufacturing Co., Worcester, Mass.:

"I have had occasion to look into the question of establishing a plant in the South, because the property with which I am officially connected has been disposed of to the State, it being in the basin of the new reservoir which is to furnish water to the Metropolitan District, so-called, and our time to occupy our present plant is limited. The result of the investigation made in that behalf has satisfied me that there are many advantages to be found in the South for the manufacture of cotton goods—decided advantages on the whole—over those found in the North. I need not enumerate them. They have been set forth in the newspapers recently with great fullness. So far as I have been able to learn, the fear of restrictive legislation in the South has not seriously stood in the way of investment of capital there. I may not be situated so that I should hear much about it, but it strikes me that it has not been felt in the North that agitation in favor of restrictive legislation in the South has become really serious.

"It needs no statement from me that any indication that 'restrictive labor laws and laws of populist character against corporations' were to be passed would at once retard or stop all idea of investment in the South for any purpose. It is as certain as the law of supply and demand that anything which causes capital to fear will prevent investment. I have no hesitation in saying, however, in answer to your suggestion, that absolute assurance of freedom from such laws as you speak of would without doubt encourage New England capital to invest more freely in the South. Much capital has already gone there, and more is sure to go in the next few years, more than may be expected at this time. The conditions are such now that investment in the South seems almost inevitable. However, should 'restrictive labor laws and laws of a populist character against corporations' be adopted, the drift of capital in that direction would stop instantly."

#### Little Hindrance in Sight.

M. F. Foster, Milford, N. H.:

"As a resident of the South engaged in cotton manufacturing for more than twenty-five years, I have had an oppor-

tunity of informing myself regarding the advantages of Southern manufacturing versus Northern manufacturing. The past ten years I have resided in New England, and have watched the growing tendency of capital to go South to engage in cotton manufacturing. It has required a whole decade to satisfy the New England manufacturer that the South possessed advantages over the North for manufacturing. This has been fully decided so far as proximity to the cotton and coal fields and to climate is concerned, but the labor question has not been so fully solved. Unfavorable legislation against corporations has already commenced in some of the Southern States, and is carefully watched by those who have capital to invest. It is thought by some that it will be only a question of time before the Southern manufacturer will be handicapped by adverse legislation regarding the hours of labor. New England capital will move slowly southward for investment in manufacturing until there is greater assurance that the same labor troubles will not arise in the South that confronts the New England manufacturer today. It will be many years before the question of extremely short hours of labor will become a serious hindrance to successful manufacturing in the South. By that time the Southern people will become better educated to manufacturing, and will be in a condition to conduct their business on more economical principles than at the present. It is clear that the advantages of the South for cotton manufacturing will stop the building of cotton mills in New England, and much of the surplus capital that would be employed will find investment in the South. There can be no doubt if it were possible to have the absolute assurance of freedom from restrictive labor laws against corporations in the South that New England money would seek investment in Southern enterprises, as New England manufacturers are thoroughly disgusted with the prevailing tendency to adverse legislation against their interest."

#### For National Interference.

John S. Adams, Jr., superintendent Adams Brothers Manufacturing Co., Maple Grove Warp Mills, Adams, Mass.:

"If I were considering the erection of a new mill I would surely consider the South very seriously, but when firmly located in the North there are many questions to be considered. There is also here a general feeling that in a comparatively few years the South will experience in her legislatures the same problems in regard to capital and labor that the North has and does. The people of the South are alive to the natural advantages of the country, and to the benefits to be derived from the development of the same, and it is my belief that if they expect to see their industries fully matured they must not hamper them by any laws, 'for the present, at least,' which would in any way discourage capital from investing in them. I am a firm believer in a national law for labor. If we must have labor laws, why should the people of one State be handicapped by laws which cannot but discourage capital from entering legitimate fields, and which only react on the laborer. Capital will go only where it sees at least a fair interest on the investment. Industries, to be permanent and have stability, should not be of mushroom growth, but the South would indeed be unjust to herself if she did anything to hinder in any way the constant flow of capital which is coming to her, and which is necessary to develop her industries, which will give employment to thousands of people. The Southern States put in



operation last year six spindles to every one put in operation in New England, and probably will continue to do so just so long and in proportion that she presents advantages over the North. The present state of affairs in the North will undoubtedly cause many to look to the South more seriously than ever before, and the question of labor and the laws regulating it will have much influence in the placing of capital."

#### For Future Security.

M. W. Quinn, agent Hamilton Woolen Co., Amesbury, Mass.:

"I have recently made an extensive trip of investigation through the cotton-manufacturing districts of the South, and have had ample opportunity to notice the advantages and disadvantages of the different States and sections of same. All who are familiar with conditions existing in both sections agree that the South has now a very marked advantage, but the question that is being widely discussed in New England today is, how long will these favorable conditions last? It is the general opinion in the East that the trend of restrictive legislation will continue in the South, and that in the near future the difference in that respect will be but slight, if any. I have not the least hesitancy in saying that could investors feel reasonably sure of freedom from restrictive labor legislation, which is hampering New England manufacturers so much, and especially those of Massachusetts, that the amount of capital that would be invested in cotton mills in the South within the next ten years by New England and New York parties would increase the spindles in that section more than double the amount for any ten years in the past.

"The Northern manufacturer and also the investor has a better knowledge of the advantages of the South today than ever before. Assure them that their investments will be safe from restrictive legislation, and the Northern manufacturer who is conversant with his business, seeing the advantages the South offers, will invest, and through his success and advice capital will follow. Therefore, I think the fear in the minds of manufacturers and investors in the North, of restrictive labor laws in the South of a populist character against corporations, is retarding the development of cotton manufacturing in the South."

#### Benefits to the South.

R. W. Lord, of R. W. Lord & Co., manufacturers of seine, net and fishing twine, and cotton duck, Kennebunk, Me.:

"Reliable statements and well-authenticated facts, together with my own personal observation of the situation in the South, prove that at the present time there is neither the inclination nor the inducement for any Southern State to pass laws in any way adverse to or restrictive of the introduction of outside capital for manufacturing or any other purposes. But on the contrary, there is every reason why the whole South should favor and encourage its introduction by the most favorable legislation. The fact that the South has a large surplus of native help anxious and eager to avail themselves of a rate of wages 20 per cent. at least lower than paid in Northern mills, and willing to work 10 per cent. longer hours, is of itself the strongest evidence that the labor elements of the South are not discontented or dissatisfied, and will continue to encourage and not discourage new capital and new enterprises from abroad.

"For the past five years cotton manufacturing at the South has increased more than two spindles to one at the North, and while New England has until

within a very short time been the great center and home of the cotton industry of this country, it has now become handicapped not so much by legislative enactments or foreign competition as by the pay-rolls and timetables of the South. Such being the real situation, your question, if applicable at all, would seem to better apply to the North than to the South at the present time. But while at the North there seems to be no immediate satisfactory remedy, the South is securing the full benefit of the situation, and is thus contributing largely to the prosperity of our common country. In time the question of demand and supply of labor between the North and the South will even itself up, and in the meantime both manufacturers and their employees must adapt themselves to the situation as best they can."

#### One Cause of Hesitation.

George A. Draper, treasurer the Draper Co., Hopedale, Mass.:

"There has been a halt in the matter of investment of Eastern funds in Southern manufacturing enterprises. I think the general cause of this has been the fact that the East has been making very little during the past three or four years, and its money has been fully invested. I think that during the next few years the East will invest a larger amount of money in Southern enterprises. It is a fact that many investors feel that the Southern States are less liable to pass unnecessary and troublesome legislation as affecting their corporations than the East has and may pass, and this feeling will undoubtedly be a factor in the matter of investment of funds."

#### Nearness to Market.

Louis L. Hohn, superintendent the William Clark Co., thread manufacturer, Westerly, R. I.:

"I have not as yet very seriously looked into the matter of establishing a manufacturing plant in the South, except in so far as should certain combinations of circumstances occur I might endeavor to start such an enterprise, and should look to the middle South or middle West as being nearer my market as well as possessing sundry other advantages which need not here be mentioned. Of course, 'if it were possible to have absolute assurance of freedom from restrictive labor laws of a populist character against corporations,' it would certainly hasten such a decision, as it also certainly seems that the South or middle West is becoming an important factor for consideration in the establishment of new enterprises."

#### Natural Advantages Remain.

Joseph W. Wattles, L. R. Wattles & Co., manufacturers of the Dressine sizing compounds, etc., Canton Junction, Mass.:

"At present the cotton manufacturing of the North appears to be very much overdone. It is claimed by some that it is caused by Southern competition, but I notice that some mills that manufacture goods that do not come in competition with Southern manufacturers are suffering, and pass their dividends and reduce wages. I notice that while cotton manufacturers at the North claim they cannot at present prices for goods pay expenses, and have to reduce wages, the mills at the South can keep running and pay dividends. While I am in favor of proper laws for the protection of children from working in mills, I am in favor of the mills being allowed to run without being restricted by law. I do not think any agitation so far has prevented investment in cotton manufacturing in the South. At present the conditions in the South appear to favor investments in

cotton manufacturing. Probably within a few years laws will be passed in the South that will be as restrictive as the laws in the North. As I understand the South, with the same restrictive laws that exist in the North, the South will have advantage over the North in way of climate, cost of living and various other less expenses."

#### Employers and Employees.

Theoph. W. Wilmarth, superintendent Millbury Cotton Mills, Millbury, Mass.:

"Four years of Southern and three times as long Northern experience in managing cotton mills, with a personal inspection of many of the best cotton mills of either section, leads to the conclusion that 'labor legislation' in New England has been carried to such an extent that it has become detrimental to the employee as well as a handicap to the employer. While, in some sections of the South, a conservative 'labor legislation,' considerate of the employer's interests, with a fostering care for the present and future generation of employees, would be well for all concerned, yet, when started, where will this legislating end? That is the question of all thinking men interested. 'Absolute assurance' cannot be given that there will be no restrictive legislation enacted; if there could be, many who have paused to see what the next move is to be would go on with their untrammelled plans. 'No sensible investor will go to a locality having the same laws, or one liable to have the same, from which he is seeking relief, and deems detrimental to his business."

"There are still advantages North that it will take the South years to gain. There are natural resources South that the opposite section never can obtain, coupled with the opportunity to conduct manufacturing untrammelled by unwise laws, give a great advantage in the great competition."

#### A Note of the Past.

Frederick T. Walsh, agent Lowell Bleachery and Dye Works, Lowell, Mass.:

"Capital in any locality will be timid where it is known that a free-silver sentiment, or, in other words, a fiat-money sentiment is known to exist. We hear more in this region about the old disturbance in regard to the possible trouble between white and colored labor. While at Atlanta as a member of the staff of the late Governor Greenhalge, I was enabled to receive my first accurate knowledge of the question of Southern industry, and do not hesitate to say that a perfectly sound sentiment upon the question of money would go far to give that assurance required by capital in its investments."

#### No Comparison Expected.

J. W. Pead, Merrimack Manufacturing Co., Lowell, Mass.:

"In my opinion, there is a general belief that in the future there will be 'restrictive legislation' in the manufacturing districts of the South. For myself, I believe it may not come for many years. My knowledge of the conditions in the South is slight comparatively, but I think the low labor cost would give the Southern mill an advantage, even if run the same number of hours the mills in Massachusetts are run. I have no idea that I shall see the day when the labor laws in the Southern States compare with those in Massachusetts in the matter of restrictions."

#### For a Bankruptcy Law.

C. E. Roberts, manager Hartford Steam Boiler Inspection & Insurance Co., Boston, Mass.:

"Admitting that at present the wages of the laboring people in the Southern

cotton mills are considerably less than in the North, there will soon come a time when those matters will be subject to agitation and organizations formed; these results must necessarily follow, as they have in all other localities, and I can see no way to avoid them. The enactment of a general national bankruptcy law as a protection to capitalists who feel inclined to make investments in the South and West would lessen the hesitation on the part of a great many, and, I believe, would overcome many difficulties which now exist."

#### New Machinery South.

Herbert Fisher, Taunton, Mass.:

"My opinion is, from living a short time in the South, and having relatives there, that Northern capital is not and will not be antagonized by 'unfavorable legislation.' The present stagnation in the cotton industry is overproduction, and not the tariff. The South having the newest machinery, with certain advantages, viz., lower wages, longer hours and cheap fuel, is bound to take the trade away from Northern mills on the same line of goods. I see no reason why the South should not make cotton cloth or anything else and be prosperous."

#### Profit in Both Places.

Richard H. Rice, Rice & Sergeant Engine Co., Providence, R. I.:

"I am of the opinion that an assurance of freedom from restrictive legislation in the South would undoubtedly assist the investment of capital in that section, and I am also of the opinion that there is a field for cotton manufacture in the South and also in New England which will enable the manufacture of that article to be carried on in both places with profit."

#### Hoping for Better Times.

Charles H. Fish, agent Cocheco Manufacturing Co., Dover, N. H.:

"We Northern manufacturers are, I am sure, hoping for better times in the near future. We do not begrudge the South a little prosperity, but would be pleased to share it with them rather than to have them walk off with the whole loaf. Time is a great leveler, and we must look for a proper adjustment of this situation some time in the future."

#### For Greater Assurance.

Herbert Lyman, treasurer Hadley Co., cotton-spinners, Boston, Mass.:

"If capitalists could be assured of freedom from restrictive labor laws, and laws of a populist character against corporations, they would undoubtedly invest more money in Southern mills. Better bankruptcy laws, as Mr. Lovering says, would be a great help in sending money to the South and building up her industries."

#### Mistakes of Northerners.

C. R. Makepeace, mill engineer, Providence, R. I.:

"Northerners usually think that it takes two Southern hands to do the work that one Northern hand does. My observation has convinced me that there is no difference in this respect; one is equal to the other, according to circumstances."

#### To Injure New England.

Z. L. White, Nelson D. White & Sons, cotton manufacturers, Winchendon Springs, Mass.:

"I am fully convinced, and have been for many years, that the South is bound to injure New England in the manufacture of coarse cotton fabrics."

#### Views of a Strong Friend of the South.

Arthur H. Lowe, treasurer Parkhill Manufacturing Co., Fitchburg, Mass.:

"One of the greatest advantages to manufacturing in the South is the ab-

sence of adverse legislation. I believe that some States in the South need some wise and equitable legislation to protect capital and conditions, and that capital would be attracted by such just laws, and that all populist and harassing legislation retards investment of capital and development of resources."

#### SOUTHERN FURNACE MEN.

##### Effects of Erroneous Statements About Their Birmingham Meetings.

[Special Cor. Manufacturers' Record.]  
Birmingham, Ala., February 22.

The iron market the past week was in a state of expectancy. The condition is attributed in great measure to the sensational and unauthorized telegrams sent out to the daily press giving undue prominence to erroneous information about meetings of the furnace interests. That they impressed buyers is evinced by telegrams from selling agents and numerous inquiries for information by wire. From sources that cannot be questioned as to reliability and certainty of knowledge as to the objects of these meetings, your correspondent is informed:

First. That no trust is contemplated and no combination is sought after, both being not only in violation of law and sound public policy, but derogatory to furnace interests.

Second. That so far from there being antagonistic or clashing interests giving rise to dissensions, all are practically unanimous in sentiment and harmonious in conclusions.

Third. That these meetings are for the exchange of knowledge gained from experience and to perfect by its application furnace practice and business methods of handling iron.

Fourth. That at the meeting the past week no conclusion involving definite action on anything of interest to the public was arrived at.

Fifth. That the meeting adjourned to this week, and they will continue to be held as long as they subserve the mutual interests of the parties concerned, and that beyond this there is no significance in them.

It could probably be added without violence to the truth that the cost of production in other sections is being closely studied, and that much thought is being directed to the means necessary to maintain and increase in importance the place in the iron world held by this district.

Another by-product plant is on "the tapis," involving the expenditure of several hundred thousand dollars, and in which more than one interest is concerned and served. The city has granted the right to lay mains for gas to a company composed of Sol. Haas and his associates, who bind themselves to furnish gas to consumers here at a rate considerably less than has heretofore obtained. Mr. Haas is manager of the Sloss Iron & Steel Co., but he appears in the contract only as an individual. The by-product company now steps in, making a contract with the Sloss Company to take their coal at an agreed-on price and furnish them coke accordingly on a plan similar to that of the Semet-Solvay Co. with the Tennessee Company at Ensley. The newly-formed gas company is to take the gas of the by-product company, refine it and supply consumers with both illuminating and cooking gas at prices greatly less than has prevailed.

The other by-products, ammonia, tar and aniline dyes, will find sale in open market. Anticipating favorable response to the scheme, everything connected with its financing has been completed and those details perfected and provided for

that usually delay work. The plant will be convenient to the Sloss furnaces, and no time will be lost in commencing operations. The Semet-Solvay Co. at Ensley has been just a year building the by-product plant there, and it is not yet completed. So it will probably be 1899 before the new one is ready for operations. Another company now enters the field, offering to supply gas by the by-product process at still lower rates. So if competition is any evidence of lowered prices Birmingham is freed from all danger in the future of a gouge on this question.

The minor industries report satisfactory business, and prospects for full shops as very good. The most of them are carrying all the work their capital will permit. As capacity increases it seems to attract additional business, and the field for enterprise has here only its outskirts occupied. J. M. K.

#### THE CURRENCY QUESTION.

Ex-Mayor of Charleston, President of the Courtenay Manufacturing Co., Discusses the Subject.

Newry P. O., S. C., February 21, 1898.  
*Editor Manufacturers' Record:*

I am not well enough informed about so extended and complex a subject as finances for the whole country as to write intelligently about it, as you request, but having been brought up in business in the ante-bellum period, when the United States government attended to its own banking business and the several business communities of the Union attended to theirs, I primarily think very favorably of those good, very good days. Times have changed since, and it may not be possible, with rapid transit, electric cables and telegraph lines, to restore those old conditions, but the sooner the country gets as near as it can to those early arrangements the better. This would involve the necessity of the United States government going out of the banking business, arranging its treasury system throughout all the States to collect and disburse its revenues, and so leave banking free, under some wise and liberal general banking law, to secure uniformity in the kind and value of currency.

Gold at present is the most stable measure of value, and the most available standard, but its use is merely as a standard, while banking means the use of credits, and there are hundreds of different securities as good to secure note issues as United States bonds, of which there should be none at all in a great and wealthy country such as ours is, and will not be ten years after the country gets settled down to its coming great career of substantial prosperity. There is surely a safe margin between the extreme gold and silver views at present in hostile array, and the sooner the country is permitted to adjust its own banking to its own needs, the sooner prosperity will come to every section.

"State tamperings with money and banks" is treated with much ability by Herbert Spencer in a lot of "essays" published by D. Appleton & Co. in 1871, which it might be well for you to procure and present the salient points of to your large circle of readers. There is an amount of general unrest North, South and West on this question of gold, silver and currency, which should cause quick reflection among all thoughtful citizens, and a remedy found now. It would be a disastrous condition for every community in this broad land if our finances, entirely based on United States bonds, should be found some early day based on silver, instead of gold, and it is just as

well to recognize this awkward fact as among the political possibilities of the near future.

Are we not drifting steadily to the naked issue of the "masses" versus the "classes?" George III tried that in the last century, and the present Congress would do well to profit by that unwise example!

Respectfully,  
WM. A. COURTENAY.

#### INSPECTION BY NORTHERNERS.

Studying the Industrial Opportunities of Houston.

[Special Cor. Manufacturers' Record.]  
Houston, Texas, February 21.

A number of Northern manufacturers, including tilemakers, brickmakers, as well as shoe and furniture producers, have been in and around Houston during the last few days.

The deep-water delegation to Washington will leave this city the 23d and go direct to the Capital in a special Pullman.

The combined bank clearances of the cities of Houston and Galveston last week were \$13,117,092. This was exceeded only by eight American cities. This showing is certainly evidence that the trade of the agricultural West is seeking Gulf outlets.

The increased interest in tobacco culture is very satisfactory to those of our people who believe that Texas can only become wealthy through diversified crops. Experts from the different tobacco districts of this country and Cuba are investigating the outlook here with a view of making the tobacco crop one of the most important in Texas.

The live-stock in and around Houston has been greatly improved during the last few years, and this is especially true of horses. We have a great many fine horses. Rilma, the greatest purse-winner of the season last year, belongs to a Houston stable.

With bank clearances on the increase, new manufactories being located, new railroad depots being erected, the capacity of our factories being increased, and many new residence as well as business houses being built, 1898 promises well for Houston.

#### New Industries and the Round Bale.

Huntsville, Ala., February 14.  
*Editor Manufacturers' Record:*

We have contract with Eastern parties to put up a mill here, but the details have not been arranged, and we do not want to give it wide publicity or give any names until everything is closed.

Machinery has been purchased and is now on the way here for the manufacturing of cotton-mill supplies, such as spools, bobbins, etc.

The deal with the cellulose plant referred to is not consummated yet, but we have a proposition from the owners of the patent and are now working on it.

We also have in contemplation a number of good-sized industries which we think will materialize within the next thirty days.

At our mill we now have under construction twenty new houses, and will be running night and day within the next ten days. This will give us a daily output of 12,000 to 13,000 pounds. We have put in our order for machinery to double the capacity of our gin and press for putting up the round bales of cotton. With our new machinery next fall we shall be able to take care of a bale of cotton every five minutes.

Our experience with the round bale this season has been such that we are satisfied it is the coming bale and will be almost universally adopted by the cotton raisers of the South.

In this neighborhood we saved the farmers large sums of money last season, as we cut the price of ginning, covering and compressing to \$1 per bale. They have heretofore been paying \$2.75 per bale. We have also paid them one-eighth cent per pound premium on their cotton.

T. W. PRATT,  
President West Huntsville Cotton Mills Co.

#### TO GREET MANUFACTURERS.

Provisions for Exemption from Taxation in South Carolina.

In last week's Manufacturers' Record comment was made of a movement now on foot in Georgia for the securing of an adoption of an amendment to the constitution of that State permitting the exemption of manufacturing enterprises from taxation by county and municipal authorities, and the enthusiasm evinced at the recent convention at Atlanta would seem to indicate that the plan will be worked through to a favorable conclusion.

The adjoining State of South Carolina seems to have realized the need of such legislation before the people of Georgia did, as the constitution of South Carolina, which was adopted a year or two ago, makes provision for this great need of the South. Article 8, section 8 of the constitution of the State of South Carolina reads as follows: "Section 8. Cities and towns may exempt from taxation by general or special ordinance, except for school purposes, manufactories established within their limit for five successive years from the time of the establishment of such manufactories; provided, that such ordinance shall be first ratified by a majority of such qualified electors of such city or town as shall vote at an election held for that purpose."

The city of Charleston has already taken action on this provision of the constitution, and at an election held some months ago it was unanimously carried through, there being less than 100 votes against it.

Charleston enjoys large natural advantages for manufacturing purposes, cheap fuel, the best of Virginia steam coal being obtainable at about \$3.25 per ton of 2240 pounds, delivered in the fireroom; also genial climate, cheap living and good health. Cheap electric-power is obtainable for small enterprises. Cheap freight by water and rail.

There is at the present time about \$10,000,000 invested in manufactories in the city of Charleston, nearly all of which is home capital.

Several small enterprises with outside capital have already availed themselves of the tax exemption, and their example will no doubt be followed by many others as soon as the tax exemption and other favorable existing conditions become more generally known.

#### Believes in the South.

Mr. A. G. Robinson, of Black Mountain, N. C., in a letter to the Manufacturers' Record, says:

"I beg to thank you for your kindness and courtesy in responding to my request for matter on the industrial South. The pamphlet is deeply interesting and will be of service to me, and, I hope, of service to others. I am a Massachusetts man, but my faith in the industrial future of the South could not be hauled on the heaviest freight train ever run over the Southern Railroad, and I am glad to do what little I can to further the development and advancement of this section."

The volume prepared by Mr. Herman Justi, containing the history of the Tennessee Centennial Exposition, is ready for publication.



**POWER FOR FACTORIES.****Desirable Mill Sites at Fredericksburg, Va.—Advantages Offered.**

To anyone seeking a desirable locality for manufacturing, especially the textile industry, the city of Fredericksburg, Va., offers many opportunities. In fact, it has a combination of advantages which few communities in this country possess. Fredericksburg is located on the principal railroad trunk line between the Northern market and the South, being nearly midway between Washington and Richmond, Va. It is the only market for a section of the country ranging from thirty to fifty miles around it. It is the principal station on the Richmond, Fredericksburg & Potomac Railroad between

two and one-half miles from Fredericksburg, on both sides of the river, has been acquired. The works were constructed in 1856-57, being designed and built by the experienced hydraulic engineer, John Chase, of Chicopee, Mass. The cost of the lands, water rights and works was very low compared with similar enterprises, because of the natural facilities of the location. The dam is on the same plan as that at Holyoke, Mass., and is firmly set on a natural rock formation. Its dimensions are: Length, 900 feet; height, eighteen feet. The abutments are of granite, the timbers of heart-pine, sawed one foot square. The main canal has capacity to deliver on the banks of the river at Fredericksburg 4000 horse-power on an available head and fall of forty-six feet. The measurements taken

tively low stage of the river. At the time it was taken, however, it is estimated between 350 and 400 horse-power was running over the dam. The permanent supply from the falls of the Rappahannock attracts much attention. The streams which feed it ramify in so many different directions that if rain falls over any portion of Central, Northern or Western Virginia much of the water finds its way to this river. Many of the largest streams in the country are supplied by branches which extend through a comparatively small area, and are consequently so low at times as to seriously affect the industries depending upon them for power, although at certain seasons of the year they may be at flood height and carry far more water than enough to supply the needs of the manufacturers.

the silk mill of Walter C. Stearns, which operates 12,000 spindles and employs about 110 people; the Washington Woolen Mills, of which John G. Melville is superintendent, one of the most important plants of this kind in the South, having nearly 1000 spindles and sixteen looms, and two flouring mills, having a daily capacity of nearly 300 barrels. The owner obtains an annual rental from these sources of \$2860, although less than 10 per cent. of the present power is now utilized. Also in operation in the city are a sumac mill, a foundry and machine works, a plow factory and a shoe factory, not including several smaller enterprises. It is calculated that the present dam would supply all the industries in the city combined and then have a surplus of fully 3000 horse-power.



THE FALLS OF THE RAPPAHANNOCK.

Washington and Richmond, and is the stopping point for all of the through express trains of the Atlantic Coast Line and the Seaboard Air Line between New York and the heart of the South. The Potomac, Fredericksburg & Piedmont Railroad connects it with Orange C. H., Va., reaching the Southern and Chesapeake & Ohio Railroad systems at this point. In addition to the railroad facilities, the Rappahannock river is navigable to the city, and steamboat lines are in operation direct to Baltimore by the way of the river and Chesapeake bay, also to Norfolk and Portsmouth, Va.

A feature which especially commends itself to manufacturers and industrial promoters is the abundance and excellence of the water-power which can be obtained. Under a charter from the legislature the entire water-power afforded by the falls of the Rappahannock river,

by Mr. Chase show that the average flow of the river affords this amount of power. Of this less than 400 horse-power is used by the existing mills, leaving over 3600 available.

The formation of the river bank upon the site where the dam is located, is of such a character that the height of the structure could readily be increased to develop at least 2000 more horse-power, making in all 6000. It might be stated that the opportunities for constructing such work are the best, as at this point the granite formation is so hard that it will remain exposed for centuries to the action of the elements without any perceptible effect. The banks of the river are almost perpendicular, and the stonework on either side can be readily fastened to a natural wall of the same material. The accompanying illustration shows the waterfall during a compara-

It is unnecessary to refer to the storage reservoirs in New England and elsewhere erected for the purpose of preserving the surplus water for use in the period when the river runs dry. In the case of the Rappahannock such reservoirs are entirely unnecessary, as its power can be depended upon every month in the year.

A canal two and one-half miles in length supplies several of the principal industries of the city, also furnishes water for the supply of the community, for such is its quality that it is unnecessary to use any process of purification or any other supply than that which has come through the canal in question. This is owing to the fact that above the falls the river is in its natural state and not polluted by drainage or refuse from factories or other plants. Among the mills utilizing the power from this source are

While an excellent opportunity is afforded to utilize it for generating an electric current which would far more than supply all the factories now in operation in and around the city, the water-power itself can be obtained at such a low price that an electric plant would have to be very economically constructed to offset the natural advantages at this point. There is, however, an opportunity for a street railroad to be operated by electric power, which would do a profitable business carrying passengers and freight between the mills, the railroads and the steamboat landings and traversing the principal streets of the city, which has a population of 5000.

While Fredericksburg would be an excellent location for a variety of interests, it seems especially suited for the textile branch, as already stated. Cotton can be obtained by rail direct from the North

Carolina fields or by water by way of Norfolk and the Rappahannock river. Woolen manufactories could obtain an abundant supply of raw material were they located at this point, as such a mill would increase the interest in sheep-raising among the farmers in the locality, who more than supply the existing mill. It has been found that the mulberry upon which the silkworm thrives can readily be grown within a short distance of the town, and with proper encouragement it is not impossible silk manufacturers could obtain a supply of material. Reliable white labor can be obtained among the people in the vicinity.

The water-power is entirely controlled by the Fredericksburg Water Power Co., Fireman's Building, Baltimore, Md., which, in addition to the canal referred to, has about fifty acres of property, most of which is admirably located for mill sites in case it is desired to use water-power alone. Fully twenty-five factories could be built along the canal already constructed at advantageous points. As to the canal itself, it can easily be made from seven to nine feet in depth, as desired, although at present it is not less than five feet at any point, the width at the bottom averaging sixty-six feet. It was originally a portion of the canal used for navigation to the edge of the Rappahannock and is constructed in a substantial manner. Extensive repairs have been required but once to either dam or canal. These were occasioned by an unusually high freshet.

The policy of the city is to treat manufacturers and all outside parties who desire to locate in Fredericksburg, very liberally. Most of the plants in the city are exempt from taxation, while to those who are in earnest about establishing business or manufacturing enterprises inducements would be offered in the way of free sites.

Leaving aside money considerations, however, it may be said that Fredericksburg is one of the most beautifully located towns in the country. The river at this point is very picturesque, with high bluffs running down to the water's edge, partially wooded, while here and there are to be seen imposing mansions, many of which were built in colonial days. The city has a number of educational institutions, including the College of Fredericksburg, churches of nearly all denominations, two newspapers and an excellent hotel. The people from a very large portion of Virginia obtain all their supplies from the city, and the large number of its mercantile establishments is especially notable.

"Public Buildings" is the title of an attractive brochure issued by Mr. Frank P. Milburn, architect and superintendent, Charlotte, N. C. The volume illustrates his work in North Carolina, South Carolina, Georgia, Kentucky, Virginia, West Virginia and Indiana. He makes courthouses and jails a specialty, but the illustrations demonstrate his skill in other lines. The publication itself is an illustration of his progressiveness, practical bent and artistic sense.

This spring the building of over 500 houses, varying in cost from \$1500 to \$7000 each, will be started in different parts of the country upon plans and specifications published by the Ladies' Home Journal, in addition to over 100 other houses which have already been built.

A convention of business men and manufacturers will be called to meet at Nashville to advance the proposition for the exemption from taxation of manufactures in Tennessee.

## COMMERCE.

This department is devoted to a record of the rapidly developing commerce of Southern ports.

### WILL DEVELOP SOUTHERN COAL.

Organization of a Great Transportation Company with \$3,000,000 Capital.

Within the last four months there has been organized and put into active operation one of the largest transportation companies in this country. The active spirits in the organization of the company are Gen. Edward P. Meany, the Long-Distance Telephone magnate, and ex-Governor W. A. MacCorkle, of West Virginia.

The company is called the Atlantic Transportation Co., and is organized under the laws of New Jersey, and there has been paid in \$3,000,000. The stockholders and directors are among the most prominent financial men of the East. Among them are Charles F. Cutler, of the Long-Distance Telephone; Senator James Smith, of New Jersey; Roebling, the great bridge-rope manufacturer; Harvey, of the Harveyized Nickel Armor Plate Co., and a number of others.

The company has purchased and is building one of the largest barge fleets in the world, and it has a number of the finest seagoing vessels afloat. In addition to the fleet of twenty-two large seagoing barges on hand, six others are nearing completion in the Bath (Me.) yards. Each of these will have a capacity of 4000 tons. The barges are the largest and most approved kind, with all modern appliances. It has also in the stock three large ocean-going towing vessels, which will cost \$75,000 each. These will be launched within the next sixty days. They will operate from New York principally to Newport News, and all along the Atlantic coast.

The headquarters of the company is at No. 1 Broadway, New York city. The president, Gen. Edward P. Meany, is one of the ablest men in New York city in the management of large enterprises. He has had active charge of the operations of the Long-Distance Telephone for a number of years, and has also been interested in transportation matters for some time.

Ex-Governor MacCorkle is well known in West Virginia and the South, and has given a great deal of attention to matters of this kind. He is the vice-president and general counsel, and it is reported that he will go to New York city to permanently reside.

The company has very powerful financial backing and will be extensive in its operations and will operate a number of large coaling stations in the Southern waters and the West Indies. It is understood that it has procured a contract from the Chesapeake & Ohio Railway Co. for the transportation of 2,000,000 tons of coal per year for five years. It is one of the most important recent additions to the transportation facilities of this country.

### Galveston's Exports.

A recent statement of exports from Galveston, Texas, for the seven months ending in January of this year shows a total valuation of \$48,623,524, an increase of nearly \$4,000,000 over the same period of 1896-97. The value of the exports by countries for January was as follows: Belgium, \$96,215; Denmark, \$156,233; France, \$1,040,093; Germany, \$1,643,331; Italy, \$200,172; Netherlands, \$452,133; England, \$2,632,102; Mexico, \$132,611; Cuba, \$30,454; Puerto Rico,

\$2847; Uruguay, \$12,167; Cape Colony, \$5180; total, \$6,403,538.

### BETTER LATE THAN NEVER.

Another Northern Newspaper "Acknowledges the Grain" Exported Through Southern Ports.

It is gratifying to know that a Northern newspaper of the prominence of the Philadelphia Record has fallen into line in acknowledging the importance of exports from Southern ports. Commenting on what is now an old story to readers of the Manufacturers' Record, it says:

"The Gulf ports have advantages for grain shipment over the Atlantic ports which promise permanency to the growth of their export trade, which has of late been the subject of newspaper comment and of anxious interest in the Northern grain markets. They have the benefit of greatly-developed transportation facilities, of nearness to the transmissouri fields of largest grain production, of easy gradients between the inland and Gulf termini of the railroads, and of the cheap water-carrying systems which make the Mississippi river as effective a regulator of Southwestern rail rates as the Erie canal is between Buffalo and New York. These advantages more than offset the increased cost of ocean carriage for the longer voyage from New Orleans, Port Arthur and Galveston to Europe. The southward trend of the grain movement from the vast territory lying west of the Missouri river seems destined to be permanent.

"In order to retain a fair proportion of the winter grain export trade in competition with the Southern ports the commercial interests of the Northern Atlantic ports must bestir themselves to eliminate all excessive port and terminal charges, and their trunk-line feeders must readjust their charges to a competitive basis not as a momentary expedient, but in pursuance of a settled policy. Boston, New York and Philadelphia are so situated that they are reasonably certain to command a fair share of the business which originates in the Northwest or in other sections tributary to the great lakes. The hot weather will be a natural handicap of the Gulf trade in corn, but in the period of ice-locked inland navigation the shipments of Kansas, Iowa, Nebraska and of much of the territory further west will gravitate to New Orleans and Galveston as naturally as water flows down hill."

All of this is very timely except the exploded theory of "hot corn." It is well known that corn can be shipped from any of the Southern ports in summer as well as winter, if received at the elevators in proper condition. This is proved by the quantity sent through Southern ports last year. The Record should not blame the climate for the careless work of grain dealers in placing the cereal on board cars in bad condition.

### The Illinois Central and New Orleans.

The part which the Illinois Central plays in the export trade of New Orleans has been frequently referred to by the Manufacturers' Record. Touching on the system and the necessity for additional facilities at New Orleans to handle the business it is carrying, it may be said that this company has brought in a tremendous amount of freight, and enjoys great facilities for handling the same, yet great as these facilities are, they have been found inadequate this season, and at the present time there are more than 2000 carloads of freight on the roads between New Orleans and Canton and New Orleans and Vicksburg, which is held out on account of the restriction

of the terminal facilities. The Illinois Central Railroad pays out fully \$1000 per day in this city alone, in salaries, to engineers, train hands, switchmen, laborers of all classes, while the amount of business which the grain trade brings to this city in the way of extra clerical work, the fees of exporters and their employees, the men at work on the levee, telegraph service, bank deposits, exchange and other revenues, may well be said to be in its infancy, and could easily be doubled if the facilities for handling it were obtainable.

A prominent business man of New Orleans is quoted as saying that the business is practically unlimited, and if the exporters and grain shippers could be assured that there would be no delay in shipments, the business would grow to such enormous proportions as to make even the present great rush sink into almost insignificance. There are certainly money and benefit to the community in the export grain trade, or why should New York make such desperate efforts to retain it. The merchants, aided by the press of the metropolis, are resorting to every means in their power to prevent the tide of trade from slipping into other channels, and not only employ legitimate means and measures, but even resort to misrepresentation to keep the farmers and shippers from sending their grain to New Orleans for export. As regards the facilities for handling, he was of the opinion that the railroads, and the Illinois Central in particular, needed miles and miles of more trackage along the river front. They required more than double the wharf room they have at present and more elevators.

### Exports from Mobile.

Mr. E. E. England, secretary of the Mobile Chamber of Commerce, in a letter to the Manufacturers' Record relating to the development of the foreign trade of that port, says:

"The value of our exports for the past five months and some of the details were as follows: Value in September, \$258,342; October, \$591,234; November, \$1,214,789; December, \$824,360; January, \$1,185,368. Since September 1 Mobile has exported 1,342,918 bushels of corn, 25,376 barrels of flour, 22,068 sacks of cottonseed meal, 14,202 tons of pig iron. The schooner John Wilson cleared for Havana yesterday with 20,000 bushels of corn, 2500 sacks of bran, 466 bales of hay and 5000 chickens. On the 17th the steamship Indrain cleared for Japan with 3800 bales of cotton and 3850 tons of pig iron, and on the 15th the steamship Belle Vernon cleared for Tampico, Mexico, with 250 bales of cotton, twenty-three tons of pig iron and 154,000 pounds of manufactured iron and a lot of cross-ties and lumber. Our cotton exports from September amount to 268,200 bales."

### Jottings at the Ports.

Nearly 200,000 bales of cotton have been shipped from Brunswick, Ga., since the opening of the season.

The Lynchburg (Va.) Plow Works is extending its trade to Mexico and Australia. Shipments have been made to both of these countries recently.

It is announced that a new vessel has been launched for the Lord Line of steamships plying between Baltimore and Ireland ports. The new vessel is 401 feet long, 46½ feet beam and 31½ feet deep. The vessel is to have a tonnage of 7100.

The cargo of the steamer Merrimac, which recently sailed from Baltimore for Mexico with railroad equipment, was the largest of the kind ever loaded at Sparrow's Point. It weighed nearly 5000



tons, and included 4400 tons of steel rails.

Port Arthur, Texas, has been declared a port of entry by the government, and hereafter all steamers loading from its pier will be recorded as sailing from this point. The steamship Leonora is now loading a general cargo for Rotterdam, Holland.

The Lone Star Steamship Co. is carrying a large quantity of freight between Galveston and Boston, as well as New York. The steamship Miami, of this port, recently cleared for the Northern cities with the following cargo: For Boston, 6000 bales of cotton and twenty-two bales of hides; for New York, 200 bales of cotton, 8710 plates of spelter, 6320 pigs of lead, 450 pigs of copper and 134 sacks of pecans.

#### GENERAL NOTES.

##### Brief Mention of Various Matters of Current Interest.

The Virginia Bankers' Association has endorsed the Indianapolis monetary plan.

Secretary Wilson, of the United States Department of Agriculture, says that Florida makes annually 160,000,000 cigars, which come North under a Havana name.

The Water Front Investment Co. has been formed at Norfolk, Va., to purchase thirty acres of land adjoining the terminals of the Southern Railway Co. at Pinners Point, on the harbor. The price, it is stated, is to be \$65,000.

President T. B. Neal has appointed the officers who will engineer the work of the Industrial Association of Georgia. Major J. F. Hanson, of Macon, has subscribed \$100 toward the necessary expenses of the organization.

The almanac for 1898 of the Minneapolis Journal is a volume of 450 pages of statistical, official, agricultural, historical, State, national and general information which will be of use in a much larger territory than Minnesota.

The business organizations of Norfolk have made formal protest against the proposed consolidation of the Norfolk and Newport News customs districts, and against the abrogation of the winter load line rule of the British Board of Trade.

The Good Roads Association of Alabama, formed at Anniston, will work for an amendment to the State constitution allowing the county boards of commissioners or revenue to levy a property tax for the construction, improvement and maintenance of public roads and bridges.

The New Orleans Protective League has been formed for the purpose of promoting the business and other interests of the city. Andrew R. Blakely has been elected president; Mayor Walter C. Flower and John Fitzpatrick, vice-presidents, and Thomas P. Connolly, secretary.

The annual meeting of the Consolidation Coal Co. of Baltimore showed that the business of the company has developed to such an extent that a tug and three additional barges have been ordered to increase its fleet. The gross earnings from operation of mines and railroads were \$1,818,510; operating expenses, \$1,202,751; net earnings from operation, \$615,759; total income, \$723,915; net income, \$530,957. The output was 1,265,846 tons, an increase of 108,646 tons over that of the preceding year. The present officers were re-elected. They are: President, Charles K. Lord; secretary and treasurer, T. K. Stewart.

## RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

### IMPORTANT RAILROAD CENTER.

Another Large Railroad System to Terminate at Sabine Pass.

A letter to the Manufacturers' Record from an official of the Gulf, Beaumont & Kansas City Railroad Co. indicates that this company intends making several important connections, among them one with the St. Louis Southwestern system at Lufkin, Texas. According to the letter the company contemplates during the present year extending its line from Kirbyville via Jasper to Lufkin, with a branch line from Jasper to San Augustine, and also an extension from Beaumont to Sabine Pass. The new mileage contemplated in these extensions is about 145 miles, of which sixty miles are now under contract, the work to be begun not later than May 1.

With the extensions referred to completed, Sabine Pass will be the terminus of another system, the St. Louis Southwestern, which will reach it through the Kansas City, Beaumont & Gulf, making three large railway lines terminating at this point, the Southern Pacific, Kansas City, Pittsburg & Gulf and St. Louis Southwestern. This indicates the importance of Sabine Pass as a seaport from a railroad standpoint.

### Northern Central's Large Earnings.

The annual report of the Northern Central Railroad Co. shows that although the usual dividend of 7 per cent. was paid during the year, amounting to \$526,267, the increase in business justified the company in making a number of important improvements in addition to paying this amount. The earnings for the year ended December 31, 1897, amounted to \$6,732,702.97; the expenses to \$4,798,366.52, making the net earnings \$1,934,336.45. This shows an increase in the net earnings over the previous year of \$290,839.44.

According to the report there was an increase of 64,189 passengers carried over the preceding year, and an increase of 1,326,794 tons in the freight transported. The aggregate movement of coal was 7,181,026 tons, making an increase of 689,998 tons. The new mileage of track and sidings was seventeen miles.

Six hundred and seventy-two feet of steel and other permanent bridges were substituted for lighter structures. Frame passenger and freight engine-houses were erected at Monkton and Marysville, and a brick passenger station at Millersburg. The rolling stock was improved by seven new locomotives. One hundred and thirty-four freight cars were built. The terminal facilities were enlarged by the lease of Miller's wharf and the purchase of property adjacent to Jackson's wharf, Baltimore.

### Suburban Road at Charleston.

According to a dispatch from Charleston, S. C., the Charleston & Seashore Railroad Co. has made arrangements to build its trolley line from Charleston to Long Island, on the Atlantic coast, a distance of about ten miles. The plan has been largely carried out by the Charleston Electric Railway Co., which, as readers of the Manufacturers' Record are aware, is composed of Charleston and Baltimore capitalists. It is understood that the company has purchased Long Island, which is a well-known summer resort, and will erect a hotel and make other improvements. Five per cent. bonds to amount of \$400,000 will

be issued to finance the building of the road. Among those interested are W. B. Frost, W. W. Lawton, G. W. Williams, Jr., A. S. Emerson, Pringle Ravenel, Dr. F. S. Parker, George B. Edwards, Morris Israel, J. S. Buist, T. R. McGahan, S. H. Wilson, J. C. Simonds, Wm. M. Bird, P. H. Gadsden and J. S. Lawrence.

### In Good Condition.

The report at the recent annual meeting of the Consolidated Railway Co., of Baltimore, shows that this corporation is in a very prosperous condition. The gross earnings amounted to \$1,270,000, an increase of about \$60,000 over the preceding year, while the operating expenses show a decrease of \$68,600, or nearly 11 per cent. The net receipts show an increase of 22 per cent., being \$711,000. The fixed charges were \$382,000, an increase of \$7000 over the preceding year. Deducting all charges and taxes, the net income for six months is \$329,000, an increase of \$121,000 over the same period in 1896. The present officers have been re-elected. They are as follows: Nelson Perin, president; William A. House, vice-president; Thomas E. Jenkins, secretary, and Frank S. Hambleton, treasurer.

### Norfolk & Southern Extension.

In a letter to the Manufacturers' Record, General Manager M. K. King, of the Norfolk & Southern Railroad Co., Norfolk, Va., writes as follows: "This company has just completed a survey of the route of a possible branch from Snowden to Powell's Point, N. C., but the maps and estimates are not yet completed. The matter depends entirely upon the action of the board of directors, of whose purpose I have no intimation."

This line, as already stated in the Manufacturers' Record, will be about twenty-five miles long, extending through Currituck county and traversing an extensive trucking district. It will also reach several points in the "sound" country, from which large shipments of fish and oysters are made.

### To Reach Charleston Harbor.

According to a dispatch from Charleston, S. C., arrangements have been made to purchase what is known as the East Shore Terminal Railroad by a combination, which, it is stated, represents the Atlantic Coast Line, the Plant system and the Louisville & Nashville. The East Shore Terminal road is three miles long proper, but controls sidings aggregating about eleven miles. It extends along the water front at Charleston and reaches fourteen wharves, thirty warehouses and a number of other terminal buildings. It is a valuable property, and if the report is true, the railroad companies mentioned will be in a position to haul freight directly to wharves at a much lower rate than is at present charged.

### Bought a Tennessee Road.

H. M. Aiken, who, it is stated, represents Adolph Segal, of Philadelphia, has purchased the Morristown & Cumberland Gap Railroad. Mr. Segal is one of the principal owners of the Louisville Southern Railroad, which has been reorganized under this title, and was formerly the Richmond, Nicholasville, Irvine & Beattyville Railroad. The Morristown & Cumberland Gap line is forty miles in length, extending between Morristown and Corryton, Tenn. It connects with the Southern Railroad at Morristown, and with the Knoxville, Cumberland Gap & Louisville road at its other terminus.

### To Control Memphis & Charleston.

It is announced that the Southern Railway Co. has made arrangements to obtain control of the Memphis & Charleston Railway when the latter is sold at Memphis by order of the court. The stockholders of the Southern approved of the transaction at a special meeting held in Richmond.

The Memphis & Charleston Railroad is 330 miles in length, and extends from Chattanooga to Memphis. From Chattanooga to Stevenson the road runs, under a trackage agreement, over the line of the Nashville, Chattanooga & St. Louis. The property is considered valuable. It traverses portions of Tennessee, Alabama, Georgia and Mississippi.

### The Natchez & Gulf.

The completion of surveys for the Natchez & Gulf Railroad to Natchez, Miss., has attracted increased attention to this enterprise. The business men of Natchez realize the value of this line in connecting the city with tidewater, also with the extensive timber tracts which it will traverse when built, a part of which is now being opened up by lumber companies. Arrangements have been made to secure a charter for the line under the title of the Natchez & Gulf Railroad Co. A number of the principal business men of Natchez, including A. G. Campbell and W. H. Shields, as well as W. H. Hardy, and H. A. Camp of Lumberton, Miss., will be members of the company.

### New Texas Line.

A. W. Moursund, of Fredericksburg, Texas, informs the Manufacturers' Record that the business men of the town are prepared to give any railroad company completing the line between Fredericksburg and San Antonio a bonus of \$25,000. Of the distance, twenty-five miles, seventeen have been graded. This is included in the proposition, also right of way. It is proposed to complete the road eventually between San Antonio and Llano, a distance of forty-five miles.

### Railroad Notes.

J. M. Moore has been appointed auditor of disbursements of the Southern Railway Co.

Arrangements are being made by Baltimore and local capitalists to consolidate the Roanoke Street Railroad Co. and the Roanoke Light & Power Co. D. W. Flickwir has been appointed receiver pending the consolidation.

The receivers' report of the Baltimore & Ohio Railroad Co., recently made public for November, 1897, shows total receipts of \$3,643,500, of which \$775,000 was balance on hand on November 1, and \$2,861,000 receipts from traffic. The total disbursements were \$3,066,775, leaving a balance on hand November 30 of \$576,774.

The annual meeting of the Louisville Railroad Co. resulted in the re-election of the present officers. The reports showed that the gross earnings of the company have been \$1,238,041.60, and the operating expenses, including taxes, interest and dividends on preferred stock, have been \$1,136,111.96, leaving net earnings of \$101,929.64.

Messrs. T. H. Martin, editor of Dixie, and V. V. Bullock, have written a handbook of Atlanta, full of interesting data for the manufacturer, merchant or home-seeker intending to settle in Georgia's metropolis.

State Geologist John A. Gallaher, of Missouri, says that the supply of coal, of lead and zinc in the State are practically inexhaustible.

## TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

### SOUTHERN COTTON MILLS.

**Solution of the Problem of Acreage and Prices of the Staple.**

[Special Cor. Manufacturers' Record.]  
Augusta, Ga., February 17.

I have been deeply interested in the efforts of the Southern cotton planters to organize a combine for the purpose of restricting the acreage planted and curtailing the crops, and have carefully watched the proceedings of the various conventions held from time to time for that purpose to see if a feasible plan should be proposed. The more I ponder over the situation the more thoroughly I become convinced of the futility of attempting any scheme to limit the production by organization of a plant that is grown over so vast an area of country and under the present conditions. The soil is so exuberant that it produces fruits, vegetables and forage crops in such abundance and variety that local markets are readily glutted, and the prices realized become unremunerative.

Cotton is the one staple product that is readily convertible into its value in money at all times and at all places according to daily market quotations, and in consequence the landlord takes his pay in cotton, the factor makes his advances based upon the number of bales forthcoming, the merchants' credits depend upon the cotton prospects, and the tenant prefers it on account of the facilities extended for making it, together with the fact that it is a sure money crop. Under these circumstances a change in the farming situation does not seem imminent in response to debates and resolutions, especially in view of the fact that when these are over the subjects most likely to engage the attention of the convention are improved methods of cotton culture, the comparative merits of fertilizers, the different modes of baling, etc., all of which are calculated to reduce the expense of production and handling, and which have the effect of lowering the price of lint cotton instead of raising it.

If the farmers wish to reduce the surplus production why is convict labor in the Cotton States engaged in making cotton? About the time of the cotton growers' conventions, held in Atlanta and Memphis, it was announced in the public prints of South Carolina that several thousand bales, the product of the State convict farm, would be sold to the highest bidder. The State of Georgia owns a railroad forty miles long which is isolated, unprofitable and unsalable. By extending twenty-five miles to Rabun Gap a Western connection could be gained, besides opening up a magnificent section of the State which is entirely destitute of railroad facilities, but which abounds in minerals, timber and water-power. Yet when the lease of the State convicts expired, that convective of Georgia wisdom, which will go down to history as the 'possum and football legislature, signalized itself by again leasing out the convicts to make cotton and cut timber.

But leaving the competition of convict with free labor to increase the over-

plus of cotton out of the question, I cannot admit that it would be advisable, even if it were practicable, for the South to curtail her cotton crop and surrender the monopoly of the great staple to India and Egypt, notwithstanding that it occurs as a rule that a small crop brings more money than a large one. Let her first produce cotton in such quantities and at such a price that foreign competition will be annihilated, and by making her farms self-sustaining and cotton the money crop, this result can be attained. Then let her monopolize the manufacture as well as the production of cotton. Once she becomes her own customer for lint cotton, selling to the world only the product of her mills, she doubles her profit, and her supremacy will be established and her commercial independence achieved. Had the building of cotton mills progressed as rapidly throughout the South in the past few years as it has in Georgia and the Carolinas, the situs of cotton manufacturing would have already forsaken New England and would be found now far below Mason and Dixon's line.

In 1897 New England's increase in spindles was only 67,080, while that of the South was 406,874. Of this number the above-mentioned States increased about two-thirds. It is announced that an immense New York mill will come to Georgia. It is a case of come or close. When the South asserts her complete sway over the manufacture as well as the production of cotton, not only will she add 100 per cent. to the three hundred millions valuation of her annual crop, but she will advance the price of the raw material. The truth of this is demonstrated by the experience of Augusta. Her mill takings are the greatest in the South. She is the largest inland cotton mart, and prices rule the highest here. Nature was in a happy mood indeed when the South was created, and lavished her gifts with a bountiful hand. Not only have we an easy supremacy in cotton, but the same is true with iron, coal, wood, granite and marble. In 1895 the valuation of the annual product of the South of cotton, pig iron and lumber was \$506,713,821. The annual consumption by Southern industries was \$55,900,000. Hence there is annually shipped from the South raw material to the value of \$450,813,821. Of this, \$400,423,000 is paid to foreign workmen for manufacturing this material and 1,200,000 are employed to do it, who expend annually for food and clothing \$230,600,700. Here then are some suggestive figures of the South's coming greatness.

The one agency that is destined to play the most important part in realizing this is electrical transmission of water-power. By permitting advantage to be taken of the topographical features of the country mills can now be built at an immense saving in the cost of construction, and whose operating expenses will be much lower than otherwise. The Piedmont region of the South Atlantic is peculiarly adapted to its use, the Savannah river alone affording power enough to turn all the spindles in Christendom. Now is the South's golden opportunity to hasten the inevitable deportation of cotton manufacturing from New England, while the Eastern mills are passing through a crisis brought on by Southern competition. It is idle to attribute the cause of it to the low wages paid to Southern labor. The cost of living is so small in the South that the operative can save more money and live better here at the present rate of wages than Eastern operatives at their standard.

Daniel Webster, in a speech delivered at Savannah, described the natural resources of New England as consisting of ice and rocks. Certain it is that almost everything to support life there comes from the West, and all the cotton, coal and iron goes from the South. And no labor legislation can affect these conditions. Untoward events may temporarily overcome natural advantages, but the genius of the country will ultimately triumph over the accidents of time and fortune.

HENRY P. MOORE.

### INVITING THE MILLS.

**Southern Cities and Towns Welcome New Industries.**

In different parts of the South cities and towns are taking advantage of the unrest in the textile industry in New England to encourage the migration of mills to their natural location.

Mr. J. W. Alexander, secretary of the Business Men's League of Alexandria, La., writes to the Manufacturers' Record:

"Our citizens have subscribed a fund of very near \$20,000 to be taken in stock of any cotton factory that wishes to locate here, and I think if the right kind of people should come forward much more could be raised. With two new railroads building towards Alexandria, we expect quite an increase in business for the ensuing year."

The Alexandria Hotel Co., Limited, has just been organized with a capital stock of \$50,000. A site for the hotel has been purchased 93x213 feet. The building will cost \$26,000. The officers of the hotel company are Thomas Clements, president; R. W. Bingham, vice-president; C. M. Kilpatrick, secretary, and D. T. Stafford, treasurer.

The Rapides Bank has just contracted for a \$10,000 building. Among the new enterprises of the city is the Lisco-Florsheim Grocery Co., Limited, with a paid-up capital of \$10,000.

Mayor R. J. Baucum, of Morven, N. C., in a letter to the Manufacturers' Record states that his town will offer special inducements to persons contemplating the erection of cotton mills. He sets forth the advantages of the town, which has 500 inhabitants, as follows: Location in the heart of the cotton belt, on the Cheraw & Darlington Railroad, good water supply, abundant and cheap fare and healthy climate.

The Chamber of Commerce of Huntsville, Ala., points to the success of three large cotton mills already there as evidences of that city's great advantages, which are summarized as follows:

Exemption from taxation for ten years, both municipal, county and State.

One of the best inland cotton markets in the South (50,000 bales per annum).

Cheap coal, from \$1.35 to \$1.50 per ton.

High-class native white labor in abundance. No labor organizations, hence no strikes. Wages one-third less than in the East.

Sixty-six hours per week standard working time.

Fine railroad facilities. Two competing railroads, making low rates. Average rate on manufactured goods but five-sevenths of the rate on cotton to Eastern markets.

Abundance of water at no cost.

The city is healthy and has a population of 15,000.

### The Cotton Bale.

[Textile World.]

The proper baling of cotton has, as long as we can remember, been the subject of complaint, without any evidence of improvement, so far as the square bale is concerned. The greatest advance

in this direction has been made in the turning out of a cylindrical bale, against which there is no room for criticism, unless it may be in its form, but even this has its advantages. It is certainly the neatest bale that has ever been made for American cotton, and there is much promise of its general adoption, not only in this country, but abroad. \* \* \*

To the spinner, the cylindrical form, or the method of rolling up the bat from the gin, has its merits in the mixing-room. When any number of bats can be laid one upon another, as good a blending can be made as it is possible to be obtained. The only thing required would be frameworks and arrangements of inexpensive construction to accomplish this purpose.

### Caraleigh Cotton Mills.

The stockholders of the Caraleigh Cotton Mills, of Raleigh, N. C., held an important meeting during the week. Action was taken for the sale of \$50,000 in bonds and the creation of \$35,000 of non-taxable preferred stock, with a guarantee of 8 per cent. interest per annum; this stock was immediately taken up by the stockholders present. Of the \$100,000 in bonds issued under deed of trust, \$33,000 become due in April, and a financial institution offered to take \$50,000 at par, provided they constitute the sole bonded indebtedness. The profits of the company can care for \$15,000 of the bonded indebtedness by April; this left \$35,000 to be provided for, which was done, as noted above, by the issuance of the new preferred stock. Only \$85,000 has the priority of the common stock now (against \$100,000 formerly), and thus the latter is enhanced.

### Profit from Credit.

Fifteen months ago the cotton mill at Sumter, S. C., was closed on account of debt. Exactly a year ago the mill company was reorganized and operations resumed on money borrowed at a heavy rate of interest. The results were astonishing, according to the Charleston News and Courier, for during a year of remarkable distress in the cotton-spinning industry all expenses, including interest on the borrowed capital, were paid promptly and net earnings of 12½ per cent. were turned over to the stockholders. The capitalization was \$45,000, and the mill employs 100 operatives. Moreover, it has bought all the raw cotton it needs for this season, has contracts enough to run on full time for seven months and expects to declare a 15 per cent. dividend for 1898.

### New Mill at Kinston, N. C.

The Kinston Cotton Mills, of Kinston, N. C., to which articles of incorporation were granted last week, will make arrangements at once for the erection of a mill. The company intends to engage in the production of hosiery yarn. The details for the proposed plant have not yet been completed, but will be in a short time, and then complete equipment of machinery will be needed. Officers elected by the new company are W. C. Fields, president; N. J. Rouse, vice-president; J. F. Taylor, treasurer, and T. C. Dunn, secretary. The capital stock is \$55,000, with privilege of increasing to \$300,000.

### Hosiery Mills Combine.

A charter has been granted to the Durham Hosiery Mills, of Durham, N. C., with capital stock of \$60,000, and privilege of increasing to \$200,000. The incorporators named are Julian S. Carr, George M. Graham, E. H. Martin, Paul C. Graham and W. C. Griswold. The company has elected T. H. Martin, president; J. S. Carr, vice-president; George



M. Graham, secretary-treasurer; directors, the above and W. J. Griswold, T. M. Gorman and J. S. Manning. This company has purchased and will operate the Golden Belt Hosiery Mills and the Durham Hosiery Mills.

#### The Cotton Movement.

In his report for February 18 Secretary Hester, of the New Orleans Cotton Exchange, states that during the season 9,238,817 bales, an advance of 1,782,931 over last year, have been reported. The exports were 5,182,721 bales, an increase of 689,544; Northern mill takings 1,642,575 bales, an increase of 334,339, and Southern mill takings 636,615 bales, an increase of 28,000 bales.

#### Textile Notes.

Messrs. Kern, Barr & Walter, Winchester, Va., will re-establish their woolen mill, which was destroyed by fire last week.

A movement is on foot for the organization of a cotton-mill company at Greensboro, Ga., and Messrs. E. A. Copeland and W. R. Jackson are interested in the enterprise proposed.

The Cottondale Mills of the Tuscaloosa Manufacturing Co., at Tuscaloosa, Ala., have been sold to Dave Rosenau, of Northport, Ala. The purchaser paid \$44,000 for the property, and will doubtless make arrangements for putting the plant in operation.

There is talk of a cotton mill being erected at McKinney, Texas, and Mr. J. Perry Burrus can probably give information to those interested. Mr. Burrus is desirous of obtaining full particulars regarding the manufacture of cotton goods, and estimates on complete mills ready for operation, and invites correspondence.

The Mammoth Springs Cotton Mill, of Mammoth Springs, Ark., has recently added 5000 spindles and 125 looms to its equipment. The full equipment of machinery is now operating, and orders for goods are on hand that will take the output for some months. The product is 40x40-32 inches and 34 inches six-yard goods for the converters.

Mr. T. McClelland and associates, of Jackson, Miss., have in contemplation the erection of a mill for the manufacture of cotton rope, and investigations of such enterprises are now being made by those interested. In formation regarding cotton-rope mills, estimates on cost of complete equipments of machinery and other particulars are now solicited.

The new Red Bluff Mills, of Clis, S. C., now building, will equip with 5000 spindles and complementary machinery for the production of cotton yarns. Contracts for the spindles have been awarded, but the shafting, pulleys, belting, hangers, etc., are now being considered, and bids will be wanted. Mr. J. N. Maxlonee is treasurer of the company.

Mr. M. A. Smith is now erecting at Scotland Neck, N. C., the knitting mill noted last week as to be established. The plant will be equipped with sixteen knitting machines for manufacturing boys', misses' and ladies' ribbed hosiery. 250 dozen pairs daily being the capacity. The mill will be in operation in sixty days. Capital to be invested will be \$6000.

The business men of Wilmington, N. C., have formed an association to secure equitable freight rates, and have elected the following officers: President, J. Allen Taylor; vice-president, D. L. Gore; secretary, Marcus W. Jacob; treasurer, Charles W. Worth.

## COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

#### The Market for Cottonseed Products.

New York, N. Y., February 23.

We report a strong and advancing market for cotton oil. During the early part of the week under review the upward movement set in, and prices in all the grades were marked up. The market yesterday closed strong at quotations herewith given, and the increasing demand, together with the favoring position of greases generally, point to still higher prices for cotton oil. Heavy sales of crude were made during the week in the valley for Western soapmakers, and at Atlantic coast points for refiners, chiefly, 16 cents being the quotation in the latter instance. Summer yellow is selling at this market, April delivery, at 24 cents, and spot 23 cents. Barreled crude is scarce and strong at 20 cents. Butter grades are in improved demand, realizing readily 26 to 28 cents, with the entire list strong and holders anticipating a further upward movement in the near future. The firm position of lard, which at this writing rules at 5.20 cents, Chicago, May delivery, proves a helpful factor to the situation. Compound lard is in better demand, notwithstanding the advancing market. Tallow is steady at 35 cents, with firmness in greases displayed generally. The failure of the French oil manufacturers to make a favorable impression on their government with regard to a tariff on imported cotton oil must be looked upon as being helpful to the future of the business here, although it is thought that at no time was it ever seriously considered that such a measure would be adopted. Heavy sales of prime yellow are reported from New Orleans at 21½ to 22 cents, chiefly at the latter figure. At this writing buyers are taking a breathing spell, the market closing with sellers strong in their views. The closing prices are as follows: Crude, 20 cents; crude, loose f. o. b. mills, 16 to 17 cents; summer yellow, prime, 23½ to 24½ cents; summer, off grade, nominal; yellow, butter grades, 27 to 30 cents; white, 26 to 26½ cents; winter yellow, 28 to 29 cents; salad oil, 29 to 30 cents, and soap stock 1½ to 1¾¢ per pound. While the export trade has been fairly active, the market has not been depending solely on this for an outlet, as has been frequently the case. The improved domestic demand, which bids fair to remain, adds stability to the market, otherwise unattainable. Liverpool refined cotton oil has been advanced to 15s. 9d., due to the advance in Egyptian seed and the upward movement of this market. Exports for the week aggregate 10,600 barrels, the major portion of which is destined for points in Southern Europe exclusive of Marseilles, the latter being well stocked. Receipts amount to 4950 barrels.

Cake and Meal.—There is nothing new to report either with regard to prices or demand. Feeding stuffs abroad are in small consumptive demand, which explains the light enquiries for export. Domestic needs are, however, sufficient to create moderate business for the mills.

#### Cottonseed-Oil Notes.

At Texas points the movement in cottonseed products is only moderate, the principal demand being foreign. Exports of cake and meal during the past week were not as large as usual. The tone of the market for cottonseed oil is

quiet and steady, with values unchanged; prime crude oil, loose, 14½ to 15 cents, and prime summer yellow oil is offered at 17 cents, all f. o. b. mill. Cottonseed cake is still quoted at \$13.50 to \$14.75, and prime cottonseed meal \$13.50 to \$14.25 per short ton; linters, per pound, 1¼ to 2¼ cents.

In New Orleans the volume of business in cottonseed products shows some expansion, and the market is steady, with no change in values. Receivers' prices are quoted as follows: Cottonseed, \$7 per ton of 2000 pounds net to the mills, no commission of any kind to be added; cottonseed meal jobbing per carload at depot, \$17 per short ton of 2000 pounds; for export per long ton of 2240 pounds f. o. b., \$18.75 to \$19; oilcake for export, \$18.50 to \$18.75 per long ton f. o. b.; crude cottonseed oil at wholesale or for shipment, strictly prime oil, crude, 15 to 15½ cents loose f. o. b. tanks at Mississippi Valley points; in barrels, 17½ to 18 cents; refined cottonseed oil, prime in barrels per gallon at wholesale or for shipment, 21½ to 22 cents for export; cottonseed hulls delivered per 100 pounds, according to location of mill, 12 to 17½ cents; linters, according to style and staple—A, 3½ cents; B, 3¼ cents; C, 2½ to 3 cents; ashes, none.

#### Iron Markets.

Cincinnati, Ohio, February 19.

The sensational reports telegraphed from Birmingham, Ala., this week, that a war between the furnaces is imminent, that the big companies intend to break up the little ones, etc., are false. The company producing more than one-half the iron made in the South has the smallest stock on hand ever held, and has orders for more than its output during the next four months. There is no movement on foot to form a trust or pool, but all recognize that present prices are not unreasonably profitable and should be maintained.

The question of relative production and consumption will apparently soon be solved. Encouragement is to be derived from the small increase in stocks during the usually dull month of January, and from the showing of slight decrease in productive capacity. If furnace companies will restrain themselves for a few months and hold production at present point, there will be sufficient demand for all the iron.

Prices are unchanged. Nearly all sellers have reached bed rock, and recognize the folly of going lower.

Volume of business cannot be increased by further sacrifices.

In Lake Superior charcoals the tendency is in direction of recovery from the ruinous prices that have been made. Stocks have been greatly reduced; old consumers of this material induced to put it in their mixtures again, and prospects are good for much larger use than during 1897.

We quote for cash f. o. b. Cincinnati: Southern coke, No. 1 foundry \$9 75@10 00 Southern coke, No. 2 foundry 9 50@9 75 Southern coke, No. 3 foundry 9 25@9 45 Southern coke, gray forge.... 8 75@9 00 Southern coke, mottled..... 8 75@9 00 Southern coke, No. 1 soft.... 9 75@10 00 Southern coke, No. 2 soft.... 9 50@9 75 Belfont coke, No. 1, Lake Sup. 11 00@11 50 Belfont coke, No. 2, Lake Sup. 10 50@10 75 Hanging Rock charcoal, No. 1. 14 50@15 50 Tennessee charcoal, No. 1.... 12 50@13 00 Jackson Co. silvery, No. 1.... 12 50@13 00 Standard Georgia car-wheel... 14 25@15 00

New York, N. Y., February 19.

There is no new phase to the market in iron. Transactions continue in fair volume and at unchanged prices. The largest feature of the business for the past week has been orders placed by malleable iron companies for Lake Superior charcoal iron, which, owing to special circumstances well understood, is relatively the cheapest material in the

market. The foundries are, as a rule, better employed than they have been for many months, if not years. Some are pushed to their fullest capacity. One thing that aids in the expansion of business is the low prices of all kinds of raw material. The effect is naturally to encourage new projects of construction, which can be carried through at lower costs than ever were deemed possible.

There is the usual diversity of opinion as to the relative strength of the bearish and the bullish influences. The most significant point, perhaps, is that the current enormous production is practically taken up by consumption even before we have emerged from the winter months. Add to this the well-known fact that consumption will increase as outdoor work commences, and the further fact that in pig iron the entire productive capacity of the country available at present prices is active, and it can be seen how slender is the hope of those who look for lower prices further along by reason of overproduction. Every reliable avenue of information brings the same news, and from every part of the country. The activity of the spring and summer in everything that touches iron and steel promises to be the greatest in the history of the country. It is perhaps quite as healthy that prices should remain on a low level, as that they should be too rapidly advanced, as the natural result of overstimulating productions.

We quote for cash f. o. b. New York:

No. 1 X Standard Alabama...	\$10 75@11 00
No. 2 X standard Alabama...	10 50@10 75
No. 1 X lake ore coke iron....	12 50@12 75
No. 2 X lake ore coke iron....	12 00@12 25
Niagara coke malleable.....	12 00@12 25
Rome (Ga.) charcoal.....	15 00@15 50
Hinkle L. S. Charcoal.....	13 00@13 50

Chicago, Ill., February 19.

The inquiry for Southern iron for the past week has been less than for the few preceding weeks; prices have ruled about the same. Occasionally one hears of quotations being shaded a little, and there undoubtedly has been a little cutting done. On the other hand, there is considerable business being placed at full prices. With the volume of business placed and in sight, it is difficult to understand the necessity of cutting at all.

The event of the week was a purchase of 6000 tons of Northern charcoal iron, which went at a little under \$11 delivered.

Some trades were also completed for Southern charcoal iron at full prices.

It is understood that there is a fair demand for local irons, and that prices are fully maintained.

We quote for cash f. o. b. Chicago:

Local coke foundry No. 1....	\$11 00@11 25
Local coke foundry No. 2....	10 75@11 00
Ohio Scotch No. 1.....	12 00@12 25
Ohio Scotch No. 2.....	11 50@11 75
Jackson county Ohio silvery...	12 50@14 50
Southern coke No. 1 foundry...	11 00@11 25
Southern coke No. 2.....	10 35@10 60
Southern coke No. 3.....	10 10@10 30
Southern coke No. 1 8.....	10 85@11 00
Southern coke No. 2 8.....	10 35@10 60
Southern silvers.....	11 25@11 50
Tennessee charcoal softener...	11 35@11 80
Standard Georgia car wheel...	14 00@14 50
Lake Superior charcoal.....	12 00@13 00

ROGERS, BROWN & CO.

The executive committee of the Tennessee Exposition has adopted a resolution of thanks to the representatives of the Georgia, the Southern, the Plant system, the Illinois Central, the Seaboard Air Line and the Nashville, Chattanooga & St. Louis railway lines for their valuable contributions to the success of the exhibition.

Mr. Alb. Neumann, of Ocala, Fla., has resigned his position as agent for Mr. Fr. Gesterding, of Hamburg, Germany. Mr. J. Carstens, who has been with Mr. Neumann for several years, succeeds him and will take charge of the office at once, conducting the phosphate trade and completing all business arrangements made by Mr. Neumann.

## LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

## LUMBER MARKET REVIEWS.

## Baltimore.

Office Manufacturers' Record,  
Baltimore, Md., February 24.

The local lumber market shows no material change from that reported a week ago, and the movement in nearly every avenue of the lumber industry is fairly active. In yellow pine there is a fair inquiry for certain grades and dimensions, and air-dried lumber shows a more active demand, while prices are generally steady. Kiln-dried North Carolina pine is in good demand, both for local consumption and for foreign shipment, while values are firm, with a hardening tendency. White pine is steady, with a fair demand and stocks not excessive. Cypress is steady, with no urgent demand from any source. There is a fair movement in hardwoods, with some inquiry from local manufacturers and a fair demand from out-of-town buyers. There is some foreign business reported, but shippers are generally cautious, as stocks on the other side are beginning to accumulate.

## Norfolk.

[From our own Correspondent.]  
Norfolk, Va., February 21.

A pronounced activity in nearly every branch of business characterizes the general market here, and the lumber industry participates largely in the developments of trade. Manufacturers and others engaged in the lumber industry are now very much encouraged by the outlook, and the mills at this point were never busier at this period of the season. The volume of business in lumber shows decided expansion from week to week, and the demand for all desirable material is quite active. There is a brisk inquiry for No. 1 and No. 2, especially for the export trade, and, as stocks are light, prices are firm and higher. There is a marked improvement in box lumber, for which there is a good demand, with prices firm and advancing. In a local way the demand for lumber and other building material is good, and as builders have now all they can handle in the way of contracts, large quantities of material will likely go into consumption. Reports from adjacent milling sections are very favorable, and mills throughout the State are now generally well supplied with orders. The big lumber plant of J. W. Lynch & Co., of Suffolk, Va., was destroyed by fire on Saturday, together with a million feet of lumber. The loss is estimated at \$25,000, with an insurance of \$20,700 on plant, lumber and kilns. Shipments of lumber and other wood products from Norfolk during the present month have been active, and vessels of desirable tonnage are scarce, while rates are unchanged at \$2.25 to \$2.35 to New York and \$3 to \$3.25 to Boston and vicinity. Among the late charters the following were reported in New York last week: A schooner, 475 tons, from Norfolk to New York with piling at \$1350 and loaded, and the schooner J. R. Fell, 319 tons, from Norfolk to New York with piling at \$900 net.

## Savannah.

[From our own Correspondent.]  
Savannah, Ga., February 21.

The demand for all desirable grades and dimensions of lumber is still fairly active, and the general market firm, with a fair supply. The outlook at all points in the interior is very encouraging, and manufacturers and shippers look for a

good spring and summer business. A fair business is being done in crossties, and several large orders have been recently received. Prices for desirable lumber are firmer, and holders are not disposed to sell at less than list figures. Reports from Brunswick and Darien are very satisfactory, shipments being active, and at interior milling points mills are all busy and well supplied with orders. The following shipments of lumber and other wood products were reported last week: Schooner Frank S. Hall for Atlantic City with 127,896 feet of lumber; schooner John R. Bergen for Philadelphia with 7279 crossties measuring 324-825 superficial feet and 166,041 feet of pitch-pine lumber, and steamship City of Jacksonville for Baltimore with 343,040 feet of pitch-pine lumber. Baltimore steamers took out 168,627 feet of lumber. New York steamers 260,000 feet and Boston steamers 59,600 feet. The following charters were reported in New York last week: A schooner, 463 tons, from Brunswick to Boston with lumber at \$4.75, and one of 600 tons from Savannah to Bath, Me., with lumber at \$5, and a schooner, 348 tons, from Brunswick to Boston with lumber at \$4.75.

## Mobile.

[From our own Correspondent.]  
Mobile, Ala., February 21.

The lumber and timber market is fairly active, and indications are favorable for a healthy spring and summer trade. The timber market continues steady, and shippers display more or less caution in forwarding shipments, as the markets in Great Britain are still pretty well stocked. Hewn timber is still held at 12½ cents, and contracts are made at 12 to 12½ cents per cubic foot. Sawn timber is in fair demand at 10 to 10½ cents per cubic foot, 40-foot basis, while contracts are nominal. Cypress is steady at 5 to 8 cents per cubic foot, according to average. There is no demand for round poplar, oak or hickory logs. Saw logs are in limited demand at \$4 to \$7 per 1000 superficial feet for pine at mill. The lumber trade is active, and mills, both here and at nearby points, are busy, with plenty of orders on file. Among the shipments last week the following were reported: Steamer Bengore Head for Belfast, Ireland, with 75,555 feet of lumber and 15,168 cubic feet of sawn timber; the bark Stanhope cleared for Manzanillo, Cuba, with 270,000 feet of lumber, and the schooner Georgiana for Cayman with 24,000 feet. The total shipments of lumber from this port since September 1, 1897, amount to 24,934,045 feet, against 34,161,806 feet for the corresponding period last year. Among the charters reported last week in New York were the following: Schooner Emma Knowlton, 309 tons, from Mobile to Port au Prince with lumber at \$6 and port charges; British ship, 1450, and British bark, 1200 tons, from Mobile or Ship Island to the United Kingdom with sawn timber at 100/; British bark Thos. Perry, 1192 tons, from Mobile or Pensacola to the United Kingdom with sawn timber at 100/; Norwegian steamer John Wilson, from Mobile to Manzanillo, Cuba, with lumber at \$6.

## Lumber Notes.

The Cummer Lumber Co., of Jacksonville, Fla., has an order for 60,000 feet of timber, which is to be shipped to New York, and from there by sailing vessel to Klondike.

The new dry-kilns being erected by Mr. R. B. Cramer at his plant in East Suffolk, Va., is being vigorously pushed to completion. The entire mill is undergoing a general overhauling, and when ready

for business will make one of the finest plants in Virginia.

The big saw mill of J. W. Lynch & Co., at Suffolk, Va., was destroyed by fire on the 19th inst. The loss is estimated at \$25,000. The total insurance on plant and kilns was \$20,700.

Messrs. Gill & Brierly, of Raleigh, N. C., have completed a spoke factory in that city employing twenty men, with a large daily output. The entire output is shipped direct to Liverpool, England.

Messrs. Rankin & Coleman, of Brewerton, Ala., have a contract with a Pensacola firm for an unlimited amount of crossties for foreign shipment. It is said that the contract will cover a period of from three to five years.

The schooner Mattie A. Franklin cleared last week from Wilmington, N. C., for Port of Spain, Trinidad, with a cargo of lumber from the Kidder Lumber Co., and the schooner Estelle for Salem, Mass., with 387,000 feet of lumber from the Cape Fear Lumber Co.

Mr. E. D. Lokenhill, in his annual report of shipments of wood products for 1897 from the port of Fernandina, gives the following: Yellow pine, 43,752,000 feet; cypress, 286,000 feet, and railroad ties, 28,457,000 feet, making a grand total of 83,936,000 feet for the year.

Articles of incorporation of the Hudson River Lumber Co., of Little River county, Arkansas, were filed last week. The capital stock is \$100,000. The incorporators are Robert A. Long, Kansas City, Mo.; C. B. Sweet and C. H. Dodd, of Little River county, Arkansas.

Ex-United States Senator J. N. Stevenson, of Marinetta, Wis., and Hon. H. A. J. Upham, of Milwaukee, Wis., who own immense tracts of timbered lands in Rapides parish, Louisiana, are about to erect a saw mill near Forest Hill, on the line of the Kansas City, Watkins & Gulf Railroad.

The following clearances were reported last week from Brunswick, Ga.: Bark Bonnie Doon for Perth Amboy with 9128 crossties, schooner Willie L. Newton for New London with 100,000 feet of lumber and schooners F. C. Pendleton with 351,000 feet of lumber, Charles K. Bulkley with 401,000 and Samuel B. Hubbard with 307,000 feet, all for New York.

The Liddington, Wells & Van Schaich Lumber Co., of Menominee, Mich., will build a saw mill on the company's timber lands in Louisiana, and at the same time run a line of railroad through the forest to facilitate operations. The company owns 90,000 acres of pine land in Louisiana, 60,000 acres of which is in a solid body between Alexandria and the Texas line.

A charter was granted last week in Columbia, S. C., to the Feaster Lumber & Manufacturing Co., with headquarters in that city. The incorporators are John G. Feaster and L. C. Wharton. The company proposes to establish and operate a lumber, saw and dressing mill and woodworking establishment. The capital stock is to be \$8000, divided into shares of \$100 each.

At a meeting last week in Atlanta the saw-mill men of Georgia, through their committee, met the representatives of railroads and came to a definite agreement in regard to lumber-loading rules. The railroads agreed to modify the rules and the meeting was in every respect harmonious, the railroads endeavoring to formulate rules to correct any complaints on the part of the millmen.

The steamer Olafkyrre cleared for Hamburg last week with 3250 tons of phosphate rock, taken on at Fernandina, Fla.

## PHOSPHATES.

## Phosphate Markets.

Office Manufacturers' Record,  
Baltimore, Md., February 24.

The phosphate market, while not showing a great degree of activity, is very steady as to prices. Sales are light, manufacturers not buying very freely at the moment. There has been a better business with out-of-town parties during the week. At points of production mining prospects are better, especially in South Carolina. River miners are quite busy at the moment and there is a good domestic, as well as a better foreign demand. Considerable Florida rock is moving through Fernandina, Tampa, Savannah and Brunswick, but the shipments for the present month will be less than for the corresponding month last year. There is considerable activity in Tennessee phosphate, and shipments from the Mount Pleasant section of the phosphate belt are much larger than in January. Phosphate charters in New York last week were few, and the market is quiet, with a scarcity of desirable tonnage. The only charters reported were the British steamer Glenwood, 1253 tons, to load phosphate rock at Fernandina for Rotterdam at 16s., March, and the British steamer Ingram, 1036 tons, to load phosphate rock at Fernandina for Rotterdam at 16s., February-March.

## Fertilizer Ingredients.

The market for ammoniates has shown considerable activity during the week and advances in price are noted in several instances, while nearly the whole list is generally firm at quotations. There has been a good inquiry from Eastern buyers, resulting in considerable business. The Western market rules very steady, tankage being firm, while stocks are only moderate. There is very little demand from Southern sources. Nitrate of soda is firm for spot points, but futures are unchanged.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)	\$2 75 @	—
Nitrate of soda	1 75 @	1 80
Blood	1 70 @	—
Hoof meal	1 65 @	—
Azotine (beef)	1 77½ @	—
Azotine (pork)	1 77½ @	—
Tankage (concentrated)	1 65 @	—
Tankage (9 and 20)	1 62½ @	10
Tankage (7 and 30)	15 00 @	15 50
Fish (dry)	20 00 @	—
Fish (acid)	12 00 @	—

## Phosphate and Fertilizer Notes.

The Tennessee Valley fertilizer factory at Florence, Ala., recently established, is doing an active business, the plant being operated night and day to fill the orders on file. A single order of twenty-five carloads was taken last week.

A committee of fertilizer manufacturers of Wilmington, N. C., held a consultation last week with the railroad commissioners at Raleigh and secured a reduction in fertilizer rates of nearly 20 per cent. less than the rate now in force.

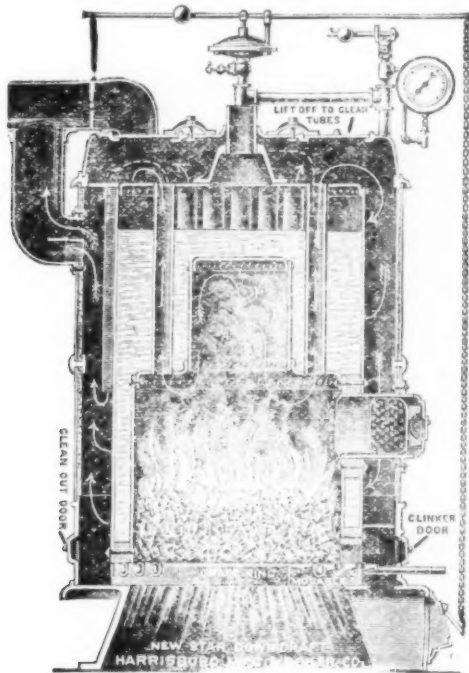
The Navassa Guano Co., at Wilmington, N. C., has just completed an addition to its plant near that city at a cost of \$30,000. The plant's capacity has been increased by 12,000 tons, making its present capacity 55,000 tons of fertilizer per year.

The shipments of phosphate rock last week from the port of Charleston, S. C., were as follows: Schooner Percy and Lillie, for Newton Creek, N. J., with 700 tons; schooners S. B. Martz with 800 tons and Samuel W. Tilton with 1500 tons for Baltimore, and schooner George W. Congdon for Barren Island with 614 tons. The total domestic shipments of phosphate rock from Charleston since September 1, 1897, amount to 45,037 tons, against 43,273 tons last year.



**MECHANICAL.****Safety Water-Tube Boiler.**

The water-tube boiler has steadily grown in favor with the leading engineers and steam users of the country for use in steam heating or power where safety, economy, efficiency, rapid steam generation and durability are objects.



THE "STAR" WATER-TUBE BOILER.

Recognizing this fact, experiments have been made that produced the "Star" safety water-tube boiler, here illustrated. In its construction are embodied all the good points of water-tube boilers (which are brick-set), combined with the great advantage that the "Star" is an internally fired boiler. This makes it economical in the consumption of coal, as there is no brick setting to absorb and radiate the heat, and as all fire surfaces are filled or covered with water, the heat is fully absorbed.

All the fire surface is of the most valuable description—water-tube and fire-box surface—which is fired at nearly right angles. About one-half of this surface is directly above the fire, exposed to the radiant as well as the conducted heat from the same. The heat and gases from the fire, during their passage to the chimney or stack, pass over and around the water tubes three times. It is evident that efficiency and economy are thus obtained.

The fire-box of the "Star" safety water-tube boiler has sufficient height to give time and room for the proper mixture of the air with the gases passed off by the burning coal. After the heat and gases pass upward among the tubes they are received into the chamber between the top of tubes and crown-sheet, where they are held until combustion is completed, and such heat and gases as have not been absorbed by the heating surfaces are drawn onward by the draft.

The water in the boiler tends to circulate in one direction, which makes the circulation very rapid and positive. The tubes, being inclined and fired under the highest point, makes a continuous upward circulation on the front of boiler and downward at the rear, which means economy of fuel.

The small space the boiler occupies, especially in height, is an important item in its favor. Being self-contained and internally fired, all brick setting is dispensed with, thus avoiding considerable expense.

In regard to safety, the claims of the

maker of this boiler are that its construction ensures all reasonable security from accident. All tubes are accessible for cleaning; the grates are of improved and thoroughly tried patterns; the steam disengaging surface is of the best, and the strength of the boilers is sufficient for life and durability. Although the principle of circulation is the same in these boilers when constructed for either

power, steam or hot-water heating, its boilers are not built alike for the different uses. The best open-hearth steel plate of from 55,000 to 60,000 pounds T. S. is used in these boilers. Tubes are of the best charcoal iron. For power boilers extra heavy plate is used, extra close and strong bracing and extra large steam and water space, and the boilers are regularly tested at 150 pounds pressure. For

the Harrisburg Manufacturing & Boiler Co., of Harrisburg, Pa.

**Chain Pipe Wrenches.**

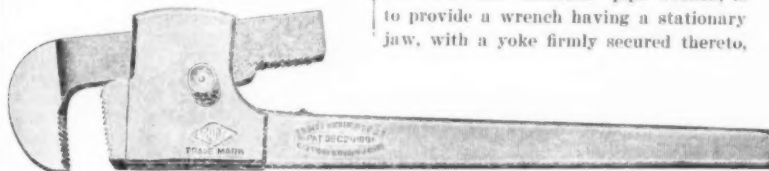
The "Vulcan" wrenches are claimed to combine the merits of all other chain-pipe wrenches, with special advantages of their own. These wrenches are the fruit of twelve years' experience in the manufacture of tools of the kind, and the superior advantages which the makers



THE "VULCAN" CHAIN PIPE WRENCH.

claim for them are worthy of investigation by users of such devices.

The salient features of the "Vulcan" wrenches are: Adapted for either cable chain or flat-link chain; chain swings from the center; has duplicate, reversible, interchangeable jaws; each of these jaws is serrated on both sides; the teeth are of saw temper and may be sharpened by filing, so that the assistance of a blacksmith is not necessary when the teeth become dull; the tool is not disabled if the



THE "BRACKIN" PIPE WRENCH.

teeth on one side break, for it can be used instantly on the other side; repairs can always be had without sending the wrench away. For any further particulars, prices, etc., address the manufacturers, Messrs. J. H. Williams & Co., of 9 Richards street, etc., Brooklyn, N. Y.

**Novel Power Plant.**

This illustration represents a pair of 33-inch McCormick turbines of 250 horse-

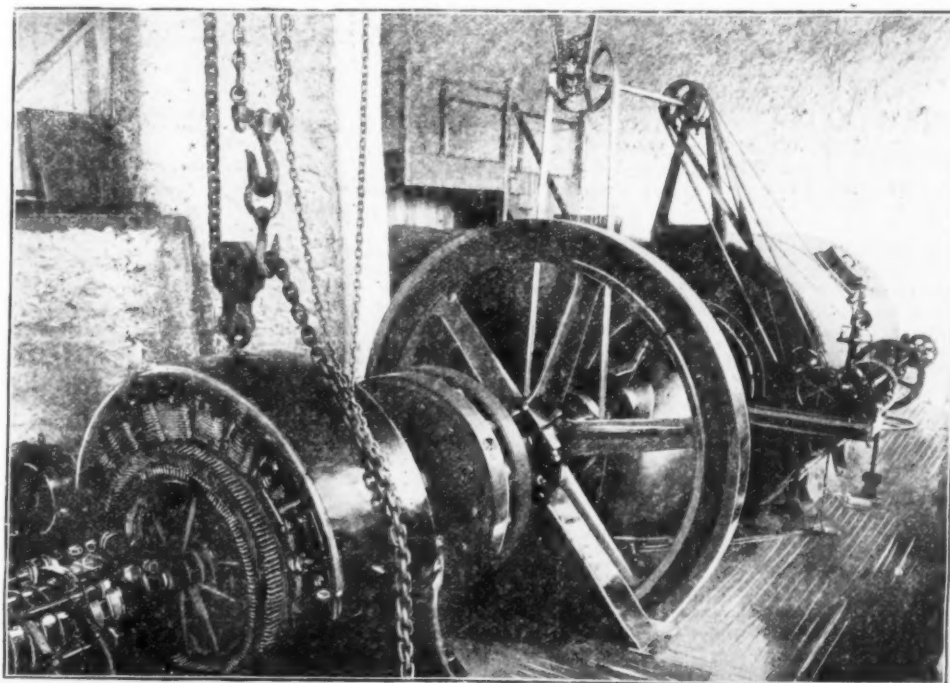
power from the power plant. This outfit has been in successful operation for about a year. The generator is of 200 kilowatt capacity and distributes current to no fewer than twenty motors, running up to 15 horse-power in their respective capacity. A novel feature of the plant is that as the power-house is liable to be flooded in unusually wet seasons, special provision has been made for hauling the dynamo right up out of the reach of the

water, so as to prevent it from receiving injury. These turbine wheels were made by S. Morgan Smith, of York, Pa.

**The "Brackin" Pipe Wrench.**

It is a well-known fact that a pipe wrench is one of the most abused of tools, frequently being used for bending pipe and for other purposes where its strength is severely tested. One of the objects of the invention which we here illustrate, known as the "Brackin" pipe wrench, is to provide a wrench having a stationary jaw, with a yoke firmly secured thereto,

and provided with a movable drop jaw, and so constructed that the fulcrum or bearing of the movable jaw will occur at that point of the wrench where the stock is strongest. The maker, in constructing this new tool, has made durability and strength prime features of the device. The jaws and pawl are made of drop forged from tool steel; special attention is given to tempering; the yoke and lever are drop forged from machinery steel;



A NOVEL POWER PLANT AT BEAVER FALLS, PA.

steam heating the same quality of material is used throughout, but plates and braces are not as heavy, as boilers are generally tested to 100 pounds. For hot-water heating same material and bracing as for the steam-heating boilers, but as no steam room is required, boilers have less space between crown-sheet and outer shell, which are flat top. For any further particulars desired address the builder,

power and 150 revolutions direct connected to a Westinghouse generator in the station of the McCool Tube Works, Beaver Falls, Pa. The turbines are mounted on horizontal shafts, each discharging into a separate draft tube. The speed is regulated by means of a Moore electric governor. The power is used by the McCool Company for operating new machine shop located a short distance

the surface of the lever, which comes in contact with the end of the pawl, is case hardened, and the fulcrum rivet, in the under-side of the arched portion of the yoke, is tempered. All parts of the tool are interchangeable. For further particulars, prices or other information address the maker, the Brackin Manufacturing Co., of 914 New England Building, Cleveland, Ohio.

# CONSTRUCTION DEPARTMENT.

**THE MANUFACTURERS' RECORD** seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in any town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and even then they must expect the return of some letters, because of the lack of knowledge on the part of postmasters of all new companies. Criticisms and complaints are invited, as they will the better enable us to guard against errors.

## ALABAMA.

Birmingham—By-product Works.—A company will be organized to erect a plant for manufacturing coke, fuel and illuminating gas, coal tar and ammonia at a cost of about \$750,000 and possibly more. Sol Haas can probably give information.

Birmingham—Gas Plant, etc.—Sol Haas and A. T. London have applied to the city council for and obtained franchise for erection of gas plant for supplying the city, etc. A company will be formed and the plant erected in the near future.

Hartselle—Flour Mill.—Wiggins Bros. are erecting a flour mill.

Huntsville—Cotton Mill.—It is stated that a New England cotton goods manufacturer has made a proposition for the erection of a \$200,000 cotton mill. Chamber of Commerce can give information.

Mobile—Brick Works.—G. F. Arnold, W. P. Martin, E. A. Arnold and M. S. Martin, all of Brewton, Ala., have incorporated the Mobile Brick Co., with capital stock of \$2000, and will establish brick works at Mobile. Address M. S. Martin, Brewton, Ala.

Sheffield—Electric-light Plant.—Incorporated: The Klison Hydrocarbon Heating & Incandescent System Co., capital stock \$5000, by W. R. Brown, A. B. Cook, Jr., H. B. Cohen and J. H. Nathan, incorporators; purpose, to erect a light and heat plant.

Tuscaloosa—Cotton Mill.—Dave Roseman, of Northport, Ala., has purchased and will put in operation the Cottontale Cotton Mill. The plant has 12,000 spindles and 300 looms; improvements will probably be made.

## ARKANSAS.

Eureka Springs—Electric Plants.—The Citizens' Electric Co. has filed articles of incorporation, with capital stock of \$25,000; directors: W. M. Duncan, president; A. R. Sayle and L. P. Badger. The purpose of the company is to operate plants for electric light, heat, ice and power purposes.

Little River County.—Incorporated: The Hudson River Lumber Co., of Little River county, capital stock \$100,000. The incorporators are Robert A. Long, Kansas City,

Mo.; C. B. Sweet and C. H. Dodd, Little River county, Arkansas. Address Mr. Long.

Mammoth Springs—Cotton Mill.—The Mammoth Springs Cotton Mill has lately added 5000 spindles and 125 looms.

Mena—Lumber Mill.—Incorporated: The Pryor Lumber Co., capital stock \$15,000, by W. S. Pryor, Clara Pryor and W. A. Carroil.

Texarkana—Springs Company.—Incorporated: The Baker Springs Co., capital stock \$2500, by Henry Moore, O. D. Scott, W. H. Arnold, J. W. Harris, J. W. Gardner, J. M. Somervell, H. H. Wheelless, George W. Taylor, George A. Hayes and R. B. Williams.

Wesson—Lumber Mill.—Incorporated: The H. C. McDaniel Lumber Co., by H. C. McDaniel, John P. Holmes, W. D. Mitchell and C. B. Bailey. The capital stock is \$25,000.

## FLORIDA.

De Land—Cassava Factory.—The Board of Trade has arranged for the location of a cassava factory which will be erected at a cost of \$25,000.

Florida—Cotton Mill, Rice Mills, Sugar Mills, etc.—It is reported that Thomas F. Shingledecker, Frank A. Hover and J. W. Foulkman, of New Castle, Pa., have purchased 40,000 acres of land in Florida and will organize a company to develop the land, erect sugar mills, cotton factory, cultivate sugar cane, etc.

Tampa—Water-works Improvements.—The Tampa Water Works Co. will improve its works, putting in new pump, engine, etc.

## GEORGIA.

Americus—Ginney.—W. M. Kidd will rebuild his burned gins and cotton gin.

Athens—Knitting Mill.—A. H. William and J. H. Dootson have established a knitting mill for underwear.

Bayboro—Trunk Factory.—H. C. Weeks is establishing a trunk factory.\*

Dawson—Telephone System.—B. D. Menger is mentioned in connection with a movement for telephone line extensions.

Greensboro—Cotton Mill.—E. A. Copeland and W. R. Jackson are interested in a movement for the erection of a cotton mill.

Griffin—Telephone System.—E. W. Coleman is mentioned in connection with a proposed telephone system.

Savannah—Mercantile.—H. Van Wagenen and others have incorporated the Abercorn Grocery Co., with capital stock of \$5000.

Savannah—Furniture Company.—Incorporated: The Mercer Furniture Co., by T. S. and B. B. Mercer.

Senola—College.—Incorporated: The Georgia Telegraph and Railroad Business College, capital stock \$25,000, by H. H. Hopple and Eugene Row.

Thomaston—Electric-light Plant.—The city does contemplate the establishment of an electric-light plant, as noted recently, but probably sixty days will elapse before the subject is definitely determined; J. R. Atwater, mayor.

## KENTUCKY.

Louisville—Broom Factory.—T. C. Cammishar will rebuild his burned broom factory.

Louisville—Stove Foundry.—Bridgeford & Co. will secure site and build a new foundry; A. B. W. Allen, manager.

Louisville—Tobacco Factory.—Incorporated: The Sutton-Patterson Co., capital \$15,000, by H. T. Sutton, J. H. Patterson and George Straus, to manufacture and sell cheroots, cigarettes, cigars and smoking tobacco.

Paducah—Slingtree Factory.—The Lack Slingtree Co. has increased its capital stock from \$6000 to \$30,000.

Paducah—Axle Works.—It is stated that the Bittendorff Axle Co., of Davenport, Ia., contemplates removing its factory to Paducah.

Paducah—Coal Mining.—Incorporated: The Paducah Coal & Mining Co., by George C. Wallace, Ed Woolfolk, E. W. Smith and George Rock, of Paducah, and Isaac Reese, of Nashville. The capital stock is \$200,000.

## LOUISIANA.

Alexandria—Cotton Mill.—The Business Men's League has raised a fund of \$20,000 to assist in the establishment of a cotton mill.

Crowley—Canal Construction, Irrigation,

etc.—The Ferre Canal Co., Limited, capital stock \$10,000, has been incorporated for the purpose of constructing canals for irrigation purposes, etc.; John W. Roller, president; W. W. Dusen, vice-president, and Alex. B. Allison, secretary-treasurer.

Ellisville—Ice Factory.—George M. Brown, of Franklin, La., contemplates the erection of an ice plant in Ellisville.

Glenmora—Saw Mills, etc.—It is reported that Western capitalists have arranged for the development of a tract of 400,000 acres of timber land on the Kansas City, Watkins & Gulf Railway, near Glenmora; will erect large saw mills, etc. Among those said to be interested are I. Stephenson, of Wisconsin; J. A. Van Cleve, of Marinette, Wis.; H. A. J. Upton, of Milwaukee, Wis.; C. B. Raymond, of Smyrna, Del. Letters addressed care of J. D. Lacy, New Orleans, will be delivered.

Goshen—Cotton Ginney.—R. H. Brown will erect a cotton ginney.

Louisiana—Timber Lands, Saw Mills, etc.—A dispatch from Menominee, Mich., states that the Ludington, Wells & Van Schaich Co., of that city, will build large saw and planing mills and thoroughly develop 150,000 acres of timber lands in Louisiana, near Alexandria.

New Orleans—Agency.—Incorporated: The Agenzia Italiana Luigi Dell'Orto, Limited, with capital stock of \$5000, to conduct steamship ticket offices, etc.

New Orleans—Loan Company.—R. C. Bray and others have incorporated the Crescent Loan & Jewelry Co., capital stock \$15,000, for loaning purposes, etc.

New Orleans—Medicine Factory.—The Minute Oil Medicine Co., Limited, has been incorporated, with capital stock of \$50,000, for the manufacture of oils, medicines, etc.; G. W. Stockley, general manager.

## MARYLAND.

Baltimore—Mantel Company.—Incorporated: The Broadbent & Davis Mantel Co., by Philippe A. Broadbent, Isaac N. Davis, Charles J. F. Sneider, James O. Davis and Wm. S. Cleary. The capital stock is \$30,000.

Cambridge—Cannery.—W. M. Roberts and William Taylor, of Baltimore, will establish a cannery in Cambridge.

Cumberland—Bridge.—The city and the Baltimore & Ohio Railroad Co. will construct jointly a bridge. Address the mayor.

Frostburg—Foundry.—Adam E. Hitchins has purchased the Paul foundry.

Garrett County—Coal and Timber Lands.—Pennsylvania capitalists have purchased for \$25,000 5000 acres of coal and timber lands in Garrett county; the property is to be developed. G. S. Hamill, Oakland, Md., can give information.

Rockville—Road Improvements.—The county of Montgomery will ask the legislature for authority to issue \$25,000 in bonds to improve roads, etc. Address county clerk.

## MISSISSIPPI.

Columbus—Water Works.—The city will vote February 23 on issuing bonds for \$70,000 to construct water works and sewerage system. Address the mayor.

Columbus—Iron Bridges.—Rumors say that the Columbus, Fulton & Northern Railroad Co. will construct three iron bridges; Newman Cayce, president.

Jackson—Cotton-rope Mill.—T. McClelland and associates contemplate the establishment of a cotton-rope mill.\*

Jackson—Steel Bridge.—The city contemplates the construction of a steel bridge 100 feet wide and 100 feet long. Address the mayor.\*

Natchez—Electric-light Plant.—The Natchez Gas Light Co. will expend about \$10,000 in improving and adding new machinery to its electric-light plant.

Vicksburg—Land Improvements, etc.—The Southern Land & Investment Co. has been incorporated, with capital stock of \$250,000, to deal in and improve lands, etc.; incorporators, T. R. Foster, Peter J. Schaefer, Frank W. Schaefer, Frank W. Mills and others.

Vicksburg—Coaling Station.—The Illinois Central Railroad will erect coaling station to cost about \$25,000; D. Sloan, assistant chief engineer, Chicago, Ill.; local superintendent, Mr. Grief. The last named has charge of the matter.

West Point—Electric-light Plant.—The city

has completed arrangements to secure funds for an electric-light plant, as proposed recently, and is now calling for bids; C. L. Jordan, mayor.\*

## MISSOURI.

Forest City—Water Works.—It is stated that the city proposes uniting with Oregon, Mo., to construct joint works; supply to be secured from wells. (See item under Oregon, Mo.)

Joplin—Mining.—The January Mining Co., with \$8000 capital stock, has been incorporated by O. H. Picher, Phil J. Afenning, R. C. McConnell, of Joplin; W. F. Sapp and Geo. F. Braun, of Galena. Address O. H. Picher.

Kansas City—Mining Company.—The Eugenia Mining & Milling Co. has been incorporated, with capital stock of \$30,000, by Henry C. Garner and others.

Kansas City—Grain Company.—R. L. Durrall and others have incorporated the Kansas Grain Separator Co., with capital stock of \$100,000.

New Madrid—Stove Company.—Incorporated: The Bower Stove Co., capital stock \$10,000, by S. S. Bower and others.

Oregon—Water Works.—All arrangements have been completed for providing the funds to pay for the construction of the proposed water works. Bids are now being advertised for. (See item under Forest City, Mo.) Address Lewis I. Moore, city clerk.\*

Rich Hill—Spelter Plant.—The Cherokee-Lanyon Spelter Co. will rebuild at once its burned spelter plant.

St. Joseph—Water Works.—The city is considering contracts to be made for construction of water works, etc.\*

St. Louis—Coal Company.—Incorporated: The Maguire Coal Co., capital stock \$20,000, by C. J. Maguire and others.

St. Louis—Lead Mining, etc.—The Missouri Lead & Zinc Mining Co. has been incorporated, with capital stock of \$3,000,000, by Alexander Ross, J. R. Butler, S. B. Pike and H. M. Baer.

St. Louis—Signal Company.—Incorporated: The National Signal Co., capital stock \$50,000, by Perry Bartholow and E. L. Sheetz.

Webb City—Lead and Zinc Mining.—The Fern-Annie Mining Co. has been incorporated by J. F. Lewis, Mrs. W. A. Corl, H. Dodson, G. D. Williams, Dr. Jocelyn and J. W. Ellis, to develop lead and zinc deposits.

## NORTH CAROLINA.

Asheville—Hotel.—The Swannanoa Hotel Co. has been incorporated, capital stock \$7000, by F. A. Lincoln, Hugh La Barbe and John Hey Williams.

Conover—Grain Mills.—The Farmers' Milling Co. has been incorporated to conduct a general milling and grain business. The capital stock is \$3500, with privilege of increasing to \$10,000. The incorporators are D. P. Dellinger, W. J. Hunsucker, B. E. Smith, W. N. Hunsucker, J. J. Cline, W. L. Yount, N. I. Rowe, J. F. Hunsucker, R. L. Rockett, Q. L. Little, Preston Dellinger, John K. Smith, E. V. Dellinger and V. L. Dellinger. Address D. P. Dellinger.

Durham—Hosiery Mills.—The Durham Hosiery Mill Co. has been incorporated, with capital stock of \$70,000 and privilege of increasing to \$300,000, and purchased the Durham Hosiery Mills and the Golden Belt Hosiery Mills; will operate them and probably extend the plants; T. M. Martin is president; J. S. Carr, vice-president, and George M. Graham, treasurer. Address the latter for information.

Fayetteville—Telephone System.—George A. Holderness and W. J. McDermid contemplate establishing telephone system.

Greensboro—Lumber Mill.—The Enterprise Lumber Co. will make extensive improvements to its mill, putting in considerable new machinery.

Greensboro—Drug Company.—The L. Richardson Drug Co. has been incorporated, with capital stock of \$50,000, by L. Richardson and others.

Kinston—Cotton Mill.—The Kinston Cotton Mills, reported last week as incorporated, will erect a mill for manufacturing hosiery yarns; W. C. Fields, president; W. J. Rouse, vice-president; J. F. Taylor, treasurer; machinery will be wanted.\*

Madison—Brick Works, Shale Mines, etc.—W. G. Jennings, of Greensboro, N. C., has commenced the development of shale mines near Madison, and will engage in the manufacture of brick soon.



Raleigh-Spoke Factory.—Gill & Brierly have established a spoke factory.

Rocky Mount-Ice Factory.—The Rocky Mount Ice & Electric Light Co., reported last week as incorporated, has organized with C. C. Cooper, president; E. L. Dantridge, vice-president; J. W. Sherod, secretary-treasurer, and Lee H. Simmons, manager. The company has let contract for the erection of a 25-ton ice factory. Electric-light plant contemplated will not be considered until later on. Address manager.

Scotland Neck-Knitting Mill.—M. A. Smith is now erecting the knitting mill noted last week; hosiery will be produced, using sixteen machines; capital is \$6000.

#### SOUTH CAROLINA.

Charleston-Express Company.—Chartered: The Charleston Express & Commission Co., with Jonathan Lucas, president; Walter Pringle, treasurer, and W. W. Wagner, secretary.

Charleston-Improvement Company.—Incorporated: The Long Island Improvement & Construction Co., with S. H. Wilson, president; J. C. Simonds, secretary and treasurer; W. W. Lawton, J. S. Bulst, M. Israel, P. H. Gadsden, George W. Williams, Jr., J. S. Lawrence and J. R. P. Ravenel, directors.

Charleston-Railroad Bridge.—The Brookland Electric Co. and the Lexington (S. C.) Electric & Power Co. will construct a railroad bridge to cost about \$40,000. (See item under Lexington, S. C.)

Chlo-Cotton Mill.—The Red Bluff Mills, now building, will put in 500 spindles, etc.; spindles have been contracted for.

Columbia-Cotton-mill Supplies Factory.—The Southern Loom Harness & Reed Manufacturing Co. has changed its name to the Correll Loom Harness Co., and increased capital stock to \$18,000.

Columbia-Lumber Mills.—Incorporated: The Feaster Lumber & Manufacturing Co., by John G. Feaster and L. C. Wharton, with a capital stock of \$8000, to do a general lumber, planing and manufacturing business.

Greenville-Woodworking Plant.—The Mallard Lumber Co. contemplates adding to its plant a sash and door factory.

Greenwood-Electric-light Plant and Water Works.—The city has completed arrangements to let contracts for the construction of its proposed water works and electric-light plant, and is now advertising for bids; R. M. Hays, chairman of committee.

Lexington-Bridge.—The Lexington Light & Power Co. may possibly build a railroad bridge to cost \$40,000.

Westminster-Bobbin Factory.—The Southern Shuttle Factory will erect addition to its factory and put in bobbin machinery.

#### TENNESSEE.

Chattanooga-Machine Shops.—An application for a charter has been filed for the Dupes & Adams Manufacturing Co.; incorporators named, George Dupes, T. F. Adams, D. C. Richards, W. E. Richards and Arthur T. Richards; object, to manufacture cutterheads and other machinery. Address D. C. Richards.

Crestview-Stave Factory.—A company is being formed to build an extensive stave factory. C. W. Rich, manager, can give information.

Harriman-Electric-light Plant.—The city, having sold the bonds, will arrange for the installation of an electric-light plant of 1500 incandescent lamps capacity. Information can be obtained by addressing D. W. Thomas, city clerk.

Knoxville-Mercantile.—Incorporated: The Haynes Bros. Co., by J. W. Green, J. P. Powers, J. T. Garrett, S. E. Hill and C. R. McCormick, to transact a merchandise business; capital stock \$35,000.

Nashville.—Incorporated: The E. B. Freeman Co., by Edward B. Freeman, L. R. Freeman, W. W. Buttorff, J. H. Brand, W. H. Akwell and W. H. Bliss.

Nashville-Fertilizer Factory.—J. F. and W. H. Slinger will erect a bone fertilizer factory.

Springfield-Flour and Grist Mill.—W. B. and Jesse England will erect a grist mill and flour mill.

Stillmore-Cotton Mill.—George M. Brinson is interested in a proposition for the establishment of a cotton mill.

#### TEXAS.

Beaumont-Lumber Mills.—The C. W. George Manufacturing Co. contemplates enlargements to its mills.

Blanco County-Gold Mine.—J. C. Bird, of

Alpine, Texas, has leased a gold mine in Blanco county.

Bolivar-Channels, Docks, etc.—The Port Bolivar Channel & Dock Co., of Galveston, has filed its charter; capital stock \$100,000; incorporators, L. P. Featherstone, N. Weekes, Fox Winnie and Ed McCarthy. The purposes of this corporation are to establish, maintain and operate a transfer across Bolivar channel, in Galveston bay, between Galveston and Bolivar point; to establish a terminal transfer and transportation company and docks in Galveston; to establish, maintain and operate a line of steamers, etc. Address L. P. Featherstone, care of Gulf & Interstate Railroad, Austin, Texas.

Corsicana-Oil Mill.—L. C. Garrett is interested in a movement to secure the erection of a cotton mill.

Dallas-Jewelry.—Incorporated: The S. Beck Jewelry Co., capital stock \$10,000, by A. Yartutsky, S. Beck and I. Schwartz.

Dallas-Planing Mill.—Incorporated: The Railroad Planing Mills Co., capital stock \$10,000, to operate planing and molding mills; incorporators, Thomas Beggs, R. H. Lawther and Joe E. Lawther.

Denton-Cotton Mill.—The erection of a cotton mill is proposed and endeavors are being made to form an \$80,000 stock company. B. F. Taylor can give information.

El Campo-Cotton Ginnery.—Isaacson & Co. will erect an eight-stand cotton ginnery.

Elgin-Water and Light Plant.—Rumors state that L. L. Puckett will construct a water and light plant.

Farmersville-Cottonseed-oil Mill.—The erection of a cottonseed-oil mill is proposed. W. E. Wellstone, Ladonia, Texas, can give information.

Gainesville-Cotton Compress.—The National Compress Co. has not definitely decided concerning the proposed compress for Gainesville, but if it is determined to erect it, it will cost about \$40,000 and be a 90-inch press with platform, etc.; George H. McFadden, manager, Houston, Texas.

McKinney-Cotton Mill.—There is talk of the erection of a cotton mill. J. Perry Burrus can give information.

Sherman-Gin and Oil Mill.—The Planters' Gin & Oil Co., capital stock \$50,000, has been incorporated by H. J. J. Thiessen, George Christianson, Thomas Christianson and W. L. Noble, to erect a cotton gin and oil mill.

Tyler-Machinery Company.—Incorporated: The Smith-Palmore Machinery Co., capital stock \$20,000, by Howard F. Smith, of Houston, and A. B. and C. L. Palmore, of Tyler, to buy and sell all kinds of machinery.

#### VIRGINIA.

Alexandria-Street Cleaning.—Chartered: The Seward Street Cleaning Co., of Virginia, capital stock \$100,000; Alexandria agent is Charles Bendheim; Giovanni Seward, president.

Alexandria-Trading Company.—Incorporated: The Miners' Trading Co., capital stock \$25,000, with James Donoran as president.

Newport News-Steamship Lines, etc.—The Atlantic Transportation Co. has been organized, with a paid-in capital of \$3,000,000, and incorporated under the laws of New Jersey, for the purpose of establishing and operating steamship and barge lines from New York city, principally to Newport News and along the Atlantic coast. The company has purchased and is building a fleet, twenty-two large seagoing barges being now on hand and six others nearing completion, each of the twenty-six having a capacity of 4000 tons; three large ocean-going vessels, to cost \$75,000 each, are now being constructed and will be launched within sixty days. Gen. Edward P. Meany, of New York city, is president; William A. MacCorkle, of Charleston, W. Va., vice-president and general counsel. Among the directors and stockholders are Charles F. Cutler and Henry Roebbling, of New York city; James Smith, of New Jersey, and others. For further information address the president, office No. 1 Broadway, New York city.

Norfolk-Steel Bridge.—The Atlantic City local board of improvement has adopted a resolution to obtain from the legislature permission to issue \$65,000 in bonds for providing funds to construct a bridge across Smith's creek. Address the mayor.

Norfolk-Land Company.—Chartered: The Park Land Co., capital from \$3000 to \$5000; Galen H. Coon, president; F. M. Converse, vice-president, and J. L. Converse, secretary.

Norfolk-Water-front Improvement.—The

Water Front Investment Co. has been organized, obtained charter and purchased thirty acres of land at Pinner's Point, including 1000 feet of water front, to which improvements will be made. Capital stock of company is \$25,000 and privileged at \$65,000. L. R. Watts, president; John L. Watson, secretary-treasurer.

Onancock-Shirt Factory.—The Onancock Shirt Manufacturing Co. has established a factory, putting in fifty-two machines.

Winchester-Woolen Mill.—C. A. Williams & Bros. will rebuild their woolen mill, recently reported as burned.

Winchester-Woolen Mill.—Kern, Barr & Walter will re-equip their woolen mill, reported last week as burned.

#### WEST VIRGINIA.

Charleston-Separator Plant.—The Carter Magnetic Ore Separating Co. has been incorporated by W. C. Leonard, P. C. Russell, G. L. Welch, J. A. Summers and A. C. Gunther. The subscribed capital is \$500. Address W. C. Leonard.

Charleston-Mining.—The Del Monte Leasing Co., for mining purposes, has been incorporated by A. E. Humphreys and George Davis, of Charleston; James A. McGuffin, of Sewell, W. Va., and W. H. Bryant and H. C. Dinmy, of Denver, Col. The subscribed capital is \$1000, with the privilege of being increased to \$50,000. Address A. E. Humphreys.

Charleston-Improvement Company.—Chartered: The Wauban Colonization & Improvement Co.; W. M. Cowell, Kenosha, Wis., can give information.

Charleston-Brake Company.—Chartered: The Doremus Brake & Coaster Co.; P. T. Wall, 102 West Ninety-third street, New York city, can give information.

Charleston-Mining Company.—Chartered: The Larkinsville Mining Co.; L. Garza, Pensacola, Fla., can give information.

Charleston-Mining, etc.—Chartered: The California Gold Mining & Milling Co.; Ernest A. Robinson, 41 Wall street, New York city, can give information.

Charleston-Water-works Improvements.—The Charleston Water Works Co. is preparing to install two filters for experimental purposes, and may put in six more filters.

Mammoth-Electrical-power Plant.—C. C. Clewis is constructing a large electrical-power plant, to cost about \$20,000; contracts have been awarded.

Morgantown-Glass Works.—Incorporated: The Morgantown Glass Works, with \$5000 capital, and the privilege of increasing to \$100,000, by W. H. Bush, of Springfield, Mass.; W. H. Bannister, of Fostoria, O.; Leopold Sigwart, F. B. Bannister and Frank Caples, of Morgantown. (Plant is completed.)

Waverly-Oil Wells.—Chartered: The Ross Oil Co., \$14,000 capital, all paid in, with the privilege of increasing to \$100,000. The incorporators are R. H. Ross, W. J. Rodgers, A. R. Rolston, C. P. Ross, M. S. Gano and S. H. Frazier. Address R. H. Ross.

Wheeling-Cement Factory.—Charles R. Gostling, of Baltimore, Md., and Ira Memory, of New York, contemplate erecting a cement factory in Wheeling.

Wheeling-Mercantile.—Incorporated: The E. S. Dinger Co., with an authorized capital of \$50,000, for the purpose of dealing in hats at wholesale and retail.

#### BURNED.

Ashland, Ky.—The Ashland Fire Brick Works.

Crossland, Ky.—Cotton gin of Adkins & Smotherman.

Lola, Ky.—The Clement Mill.

Rock Hill, S. C.—Piedmont Tobacco Works; loss about \$15,000.

Rome, Ga.—Bottling works of Reese Miller.

Suffolk, Va.—Saw mill of J. W. Lynch & Co.; loss \$30,000.

Valdosta, Ga.—Dry-kilns of W. E. Walls, near Valdosta.

#### BUILDING NOTES.

Alexandria, La.—Hotel.—The Alexandria Hotel Co. has been organized, with capital stock of \$50,000, to build a hotel to cost \$25,000; site 93x213 feet has been purchased. As soon as plans and specifications are ready bids will be advertised for. Address company, care of J. W. Alexander.

Alexandria, La.—Bank Building.—The Rapides Bank has let contract for the erection of a \$10,000 bank building.

Augusta, Ga.—Stores.—Walter Bound, of New York city, will build several store buildings on Broad street in Augusta, extending about \$10,000; contract has been awarded to J. H. McKenzie, Augusta.

Austin, Texas-University Building.—Bids for erection of four-story wing to main building of University of Texas, according to plans and specifications now in hands of J. L. O'Connor, architect, Austin, will be received by Thomas D. Wooten, chairman board of regents, up to February 24, 1898. Certified check for \$1000, payable to order of chairman, to insure compliance with bid, must accompany each bid. Right reserved to reject any and all bids. Wm. L. Prather, chairman building committee.

Baltimore, Md.—Dwellings.—E. A. Bryan will erect ten two-story brick dwellings.

Baltimore, Md.—Store.—J. E. Sperry has completed plans and specifications for a store building for the Castberg Jewelry Co.

Baltimore, Md.—Power-house.—Henry Brauns is completing plans for the new power-house of the Consolidated Railway Co., to be of stone, 44x216 feet.

Baltimore, Md.—Church.—A. H. Bieler is completing plans for new building of the old Sharp Street M. E. Church, to be 90x90 feet, with tower 80 feet in height, and constructed of Woodstock granite. E. M. Noel is the builder.

Barnesville, Ga.—Church.—For information regarding bids to be received on the proposed \$12,000 church building address R. G. Matthews.

Bristol, Tenn.—Residence.—Stuart F. Lindsey will build a residence.

Centerville, Ala.—Bank Building.—In about thirty days bids will be asked on the erection of the bank building, reported last week, for the Bibb County Banking & Trust Co. Plans and specifications can be seen in office of Wheelock & Co., Birmingham, Ala.

Charleston, S. C.—Hotel.—The Long Island Improvement & Construction Co. contemplates the building of a hotel; John C. Simonds, secretary.

Charleston, W. Va.—Mercantile Building.—Lewis, Hubbard & Co. have let contract to the A. F. Withrow Lumber Co. for the erection of their proposed \$25,000 grocery house.

Charlotte, N. C.—Auditorium.—C. C. Hook has prepared plans for an auditorium to be built by E. D. Latta; structure to accommodate 1500 people, be 50x140 feet, have stage equipment, etc.

Decatur, Ala.—Church.—The erection of a \$10,000 church is proposed. Dr. J. B. Gregory can be addressed.

Flovilla, Ga.—Hotel.—The hotel to be erected by Col. H. M. Scott, recently noted, will have twenty rooms and cost about \$4000.

Gainesville, Ga.—J. B. Gastin will erect two store buildings.

Georgetown, Ky.—Office Building.—The Georgetown Building Co. contemplates erecting a \$10,000 office building, seventy-five feet frontage, two stories high, etc.

Jacksonville, Fla.—Church.—The Knoxville Building & Construction Co. has contract for the erection of a \$12,000 church building.

Kansas City, Mo.—Store Building.—Burnham, Hanna, Munger & Co. will erect a six-story building 90x142 feet, etc. Address J. K. Burnham, of the firm.

Knoxville, Tenn.—Opera-house.—R. T. McCarter, Jr., of Philadelphia, has made an offer for certain land which, if accepted, will ensure the erection in Knoxville of a five-story opera-house block costing probably \$100,000. For information address J. B. Harrison, Knoxville.

Louisville, Ky.—Church.—Trinity Methodist congregation will build a \$60,000 building. Address the pastor.

Louisville, Ky.—School and Warehouse.—Mason Maury has completed plans for a \$35,000 addition for the Girls' High School, and for warehouse for Tobacco Warehouse & Trading Co., to cost \$10,000.

Louisville, Ky.—Residences.—Lewis Keller will erect \$4000 residence; P. Gerther will erect \$3000 residence; Adolph Hellenberg will erect \$7000 residence.

Louisville, Ky.—Residence.—D. X. Murphy & Bro. have completed plans for a \$35,000 residence for Mrs. Normie Hitz McCulloch.

Louisville, Ky.—Residence.—Clark & Loomis have prepared plans for a \$25,000 residence for J. A. Armstrong.

Macon, Ga.—Warehouse.—English, Johnson & Co., Macon, Ga., contemplate building a warehouse 60x300 feet, to be covered with sheet iron or asphalt roofing.

Monroe, N. C.—Opera-house, etc.—J. Shute & Sons will build a large store building and

opera-house after plans by Frank P. Milburn, of Charlotte, N. C.

Monterey, Va.—Office Building.—The board of supervisors of Highland county has decided to build a fireproof clerk's office as soon as practicable and made appropriation therefor. Address J. C. Matheny.

New Braunfels, Texas.—Courthouse.—Contract has been awarded to Fischer & Lambie, of Austin, Texas, for the erection of the Comal county courthouse at \$36,000.

Newport News, Va.—Theater.—Winston Brown, of Chicago, Ill., will erect in Newport News, Va., a theater to cost \$80,000; Thomas G. Leach, Newport News, lessee of theater.

San Antonio, Texas.—Hotel.—H. D. Kampmann will erect a four-story addition to his hotel and later on a six-story addition.

St. Louis, Mo.—Louis G. Kregel will erect a \$30,000 factory building; C. J. Christophel five two-story dwellings to cost \$8000; J. C. Newberry two buildings to cost \$8000.

Troy, Ala.—Courthouse.—Plans have been adopted by R. L. Jones, of Atlanta, Ga., for the proposed courthouse, previously noted. Building is to cost not more than \$10,000. Sealed proposals for its erection will be opened March 14. Plans on exhibition in office of probate judge, Troy, and at architect's office, 51 Inman Building, Atlanta. For further particulars address W. J. Hubbard, commissioners' clerk.

Washington, D. C.—Dwellings.—Appleton P. Clarke, Jr., is preparing plans for an apartment-house for Chr. Heurich; building to be eight stories high, steel construction of frame, woodwork chemically treated as prevention of fire, elevators, billiard halls, bowling alleys, rathskeller, Turkish baths, boilers, engines, dynamos, electric-light and power plant, ice plant, cold-storage rooms, etc. Appleton P. Clarke, Jr., is also preparing plans for residence for Horace Dodge. Spelden & Spelden have prepared plans for three houses to be erected. L. A. Barr will erect three brick houses. Bornwing & Bates will erect a store building four stories high. E. A. Atchison will build four houses.

Wheeling, W. Va.—Hotel.—F. H. Lange and C. E. Vankeuren have completed arrangements for the erection of a hotel, to be six stories high, 23x167 feet, have fifty rooms, ten of these to have bathrooms; elevators for passenger and freight, electric-light plant, etc.

Wilmington, N. C.—Residence.—Don McRae will build a residence.

## RAILROAD CONSTRUCTION

### Railways.

Alexandria, La.—Joseph J. Waitz, of Atkinson, Kan., president of the Gulf, Louisiana & Great Northern Railroad Co., states that this company has already purchased enough rails to lay 270 miles of track, and that it is proposed to build 106 miles between Alexandria and Arcadia, La., by October of this year. The St. Louis Construction Co., J. P. Alexander, president, is contractor for the road.

Beaumont, Texas.—An official of the Gulf, Beaumont & Kansas City Railroad Co. advises the Manufacturers' Record that this company intends extending its line from Kirbyville to Lufkin, Texas, by way of Jasper, Texas; also from Jasper to San Augustine and from Beaumont to Sabine Pass. The total length of these extensions aggregate 145 miles, of which sixty are now under contract. At Lufkin the line will connect with the St. Louis Southwestern system. John H. Kirby, at Houston, Texas, is vice-president.

Charleston, S. C.—It is reported that work is to begin at once on the electric line between Charleston and Long Island, a resort on the seacoast. The road will be about ten miles long and is to be built by the Charleston & Seashore Railroad Co., in which several directors of the Charleston Electric Railway Co. are interested. The directors include J. S. Lawrence and P. H. Godden. It is calculated to issue \$400,000 in bonds to finance the undertaking.

Charleston, S. C.—An act has passed the legislature chartering the Central Carolina Railroad Co., also the Sumter & Wateree River Railroad Co. and the Selvern & Knoxville Railroad Co.

Culpeper, Va.—S. R. Smith, T. E. Grimesley and others have taken up the plan to build a railroad line between Culpeper and towns in Rappahannock county.

Denton, Md.—A bill is pending in the legislature to incorporate the Denton & Federalburg Railroad Co., with \$200,000 capital. Among those interested are James B. Wright, Henry R. Lewis and H. B. Hobbs.

The line is to extend to Federalburg, Md., and it is understood is to be a feeder of the Queen Anne's Railroad, connecting with it at Denton.

El Paso, Texas.—It is reported that J. J. Gordon, of Cincinnati, O.; J. H. Maxon, of St. Louis, and Z. T. White, of El Paso, are interested in a plan to consolidate the street car lines in El Paso and Juarez, Mexico, a suburb of El Paso, and reconstruct them for the use of electric motors.

Fredericksburg, Texas.—A. W. Moursund, one of the promoters of the proposed railroad from San Antonio to Fredericksburg and Llano, Texas, advises the Manufacturers' Record that the committee in charge is ready to give any company building the road from San Antonio a bonus of \$25,000, as well as right of way and work completed. The distance graded is seventeen miles. The length of the line to Fredericksburg is twenty-five miles, and to Llano forty-five miles.

Fort Smith, Ark.—The Fort Smith & El Paso Railroad Co. has been formed to build a terminal road less than a mile in length in the suburbs of Fort Smith. W. H. Claxton, of South McAlester, I. T., and Joseph M. Will, of Fort Smith, are interested.

Hinton, W. Va.—It is reported that the Hinton, New River & Western Railroad Co. has given a deed of trust to secure \$600,000 to build its proposed line from Pearisburg, Va., on the Norfolk & Western, along the New River valley to Hinton, and along the Coal River valley to St. Albans and Charleston, W. Va. Among those interested is reported to be J. C. James, of Hinton. The Central Trust Co. of New York, it is stated, is trustee for the company.

Joplin, Mo.—It is reported that surveys are being made by the Missouri, Kansas City & Texas system between Mineral and Joplin. A. A. Allen, at St. Louis, is president of the company.

Lexington, S. C.—The Brookland Electric Railroad Co., recently chartered, proposes to build a road to Brookland and Lexington, S. C., a distance of fourteen miles. The project includes a bridge to cost \$10,000. It is understood that the Lexington Power Co., of Lexington, is one of the promoters of the plan.

Minden, La.—F. H. Drake advises the Manufacturers' Record that a company called the Arkansas, Louisiana & Southern Railroad Co. has been formed with Mr. Drake, president, and \$500,000 capital, to build the proposed line from Minden to connect with the St. Louis Southwestern at Stamps, Ark. The new line commences at a point on the Vicksburg, Shreveport & Pacific Railroad. It is stated that the new company has purchased the Minden Railroad, and that the Bradshaw Lumber Co. is associated with the enterprise.

Newport, Tenn.—It is reported that Edw. M. Bell and others, of Parrottsville, Tenn., are forming a railroad company to build a line from Newport to Bridgeport, Tenn.

Norfolk, Va.—M. K. King, general manager of the Norfolk & Southern Railroad Co., informs the Manufacturers' Record that the company has surveyed a branch from Snowden to Powell's Point, N. C., but that the decision to build it will be acted upon by the board of directors of the company.

Oklahoma City, Okla.—Johnston Bros. & Faught, of St. Elmo, Ill., advise the Manufacturers' Record that the contract has been let to them for the proposed railroad line between Oklahoma City and Sapulpa, I. T. The road is to be 108 miles long and laid with 60-pound rails. All sub-contracts have been let. It is understood that the line will be a feeder of the St. Louis & San Francisco system.

Pickens, S. C.—The railroad between Pickens and Easley is nearly completed, and it is expected to open it for operation about March 10. Hon. John Gary Evans, of Alken, S. C., is one of the promoters of the enterprise. The road is nine miles long and will be a feeder to the Southern system.

Pope's Creek, Md.—It is reported that the Pennsylvania Railroad Co. may extend its Pope's Creek branch to Chapel Point, Md., two miles. W. H. Brown, at Philadelphia, Pa., is chief engineer.

Portsmouth, Va.—John L. Watson, R. E. Boykin, T. J. Wood and others have formed the Portsmouth & Smithfield Railroad Co. to build from Portsmouth to Smithfield and to operate a ferry across the Elizabeth river. The road will be about twenty-five miles in length.

Raleigh, N. C.—An official of the Southern Railroad Co. informs the Manufacturers' Record that the Raleigh & Cape Fear Railroad, which J. A. Mills and others are promoting, is to connect with the Southern at

Raleigh, but that the latter will take no part in building the line.

Richmond, Va.—E. T. Crump, W. B. Lightford and others have formed the Richmond & Bay Railroad Co., with \$300,000, to build a line from Richmond to a point on Chesapeake bay near the mouth of the Potomac river.

Swanton, Md.—It is reported that Pennsylvania lumbermen will build a narrow-gauge railroad from Swanton to Bittinger through what is known as the Cheviot Dale property. At Swanton it will connect with the Baltimore & Ohio system. G. S. Hamill at Oakland, Md., can give further information.

Valdosta, Ga.—The promoters of the railroad line between Valdosta and Albany include Thomas Crawford, C. H. Ashley and E. P. Rose, of Valdosta. The line is to be about seventy-five miles long and the capital of the company is to be not less than \$100,000.

Washington, D. C.—J. H. Ralston, one of the directors of the National Park, Silver Springs & Hyattsville Railroad Co., informs the Manufacturers' Record that it is intended to connect the Columbia & Maryland and the Brightwood Railroad lines, the total length being about seven miles and the terminus being Hyattsville, Md. Mr. Ralston's address is Washington Loan & Trust Building, Washington, D. C.

Wilmington, N. C.—President George R. French, of the Wilmington Seacoast Railroad Co., informs the Manufacturers' Record that surveys for the extension to this line are being made and that 45-pound rails will be used.

### Street Railways.

Jackson, Miss.—Surveys have been made for about three miles of the electric street railroad to be built by the Jackson Railroad & Light Co. Construction is to begin at once. R. M. McKisson, of Cleveland, O., is president of the company.

New Orleans, La.—Arrangements are being made for the proposed street railroad line on the Metairie road, in the suburbs. R. M. Wamsley is president of the railroad company.

Raleigh, N. C.—It is reported that the Raleigh Electric Railroad Co. has made arrangements to extend its trolley system and that the city authorities will assist in building the line.

St. Louis, Mo.—The St. Louis & Ferguson Railroad Co., which has just been incorporated, will purchase what is known as the Olive Branch Electric Light & Power Co.'s property and operate a trolley line between St. Louis and Ferguson in the suburbs. Among those interested are J. B. Greensfelder, A. Arnstein and Eugene Benoist.

## Machinery, Proposals and Supplies Wanted.

**Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.**

**Air Compressor.**—Wanted.—An air compressor having a cylinder 20x20x30-inch stroke, also one having cylinder 24x24x36-inch stroke; to be crank and flywheel compressors; second-hand machines in good condition wanted. In answering state length of time used, maker's name, weight of the machine and present condition; would consider proposition for duplex machines of the same capacity. Address Warrior Machine Works, Birmingham, Ala.

**Belting.**—Belting will be wanted for stove mill at Crestview, Tenn. Address C. W. Rich, manager.

**Belting.**—Collin County Mill & Elevator Co., McKinney, Texas, wants main drive belt, 24-inch; several hundred feet five-inch dynamo belt and other sizes; send sample and prices.

**Boiler.**—W. C. Gordon, Elba, La., wants to buy a boiler for sugar-house.

**Boiler.**—H. W. Swinson, Warsaw, N. C., wants prices on 25-horse-power boiler, steel plate, horizontal fire-box.

**Boiler and Engine.**—Eli Tucker, Forest

Hill, Md., wants to buy a boiler and engine, about 20 horse-power; new or second-hand machines in good condition.

**Boiler and Engine.**—Rice & Warren, Apalachicola, Fla., want prices on 20-horse-power engine and boiler, suitable for dynamo; new or second-hand.

**Boilers and Engines.**—See "Power Plant."

**Boilers and Engines.**—Boilers and engines will be wanted for stove mill at Crestview, Tenn. Address C. W. Rich, manager.

**Canning Machinery.**—T. K. Hudgens, Easley, S. C., wants prices on canning machinery.

**Canning Machinery.**—Meigs Furniture Co., Meigs, Ga., wants to buy a second-hand canning plant for tomatoes and for catsup; capacity to be about 2000 cans daily.

**Cans.**—Charles Leydraz, Box 422, Palatka, Fla., wants to buy cans for canning fruit.

**Coal.**—U. S. C. T., care of Manufacturers' Record, wants bids on 20,000 tons of steam coal (2240 pounds to ton), free on board Baltimore. Give analysis of coal, name of mine, etc.

**Corn Sheller, etc.**—R. W. Johnston, Macon, Ga., wants to buy a corn sheller and shucker (husker).

**Cotton Ginnery.**—Isaacson Bros. & Co., Box 16, El Campo, Texas, want bids on erection of eight-stand ginnery.

**Cotton Mill.**—J. Perry Burrus, McKinney, Texas, wants full information regarding the manufacture of cotton goods, cost of mill, etc.

**Cotton Mill.**—The Red Bluff Mills, Clio, S. C., is ready to receive estimates on shafting, pulleys, belting, bobbins, general supplies, etc.

**Cotton Mill.**—Kinston Cotton Mills, J. F. Taylor, treasurer, Kinston, N. C., will want machinery for manufacturing hosiery yarns.

**Cotton-rope Machinery.**—T. McClelland, Jackson, Miss., wants information regarding the manufacture of cotton rope, estimates on mills, etc.

**Courthouse Furniture.**—Bids will be opened March 17 for furnishing opera chairs, steel file boxes and roller shelves for courthouse. Address W. P. Snelgrove, Anderson, S. C., or Frank P. Milburn, architect, Charlotte, N. C.

**Dry-kilns.**—Dry-kilns will be wanted for stove mill at Crestview, Tenn. Address C. W. Rich, manager.

**Electric Machinery.**—C. C. Lewis, of Lewis, Hubbard & Co., Charleston, W. Va., is in the market for incandescent machine of 200 lights; also machinery for electric elevators.

**Electric-light Plant.**—Bids will be opened March 8 for the erection complete of an electric-light plant of 60-kilowatt alternator, 80-horse-power engine, arc lamps, transformers and pole line, etc. Address C. L. Jordan, mayor, West Point, Miss.

**Electric-light Plant.**—D. W. Thomas, Hariman, Tenn., is receiving estimates on the installation of an electric-light plant of 1500 lamps capacity.

**Electric-light Plant.**—Proposals will be opened March 22 for the erection of an electric-light plant, to include 50-light arc machine, 1000 incandescent light machine, 40 arc lamps in place, engine, switchboard, etc.; plans, etc., on file at office of water commissioner, Greenwood, S. C., or of Nisbet Wingfield, Augusta, Ga. Address R. M. Hays, chairman, Greenwood, S. C. (See "Water Works" below.) (See advertisement in Manufacturers' Record.)

**Electric-light Plant.**—A. L. Lanier, Mount Pleasant, Tenn., wants to buy electric-light plant consisting of 300-light dynamo and fixtures for 250 lights; three or four arc lights and balance to be incandescent lights.

**Elevators.**—C. C. Lewis, of Lewis, Hubbard & Co., Charleston, W. Va., is in the market for electric elevators (freight), to be operated by electricity.

**Engine.**—Meigs Furniture Co., Meigs, Ga., wants to buy six or eight-horse-power engine.

**Fence Machines.**—See "Wire-working Machinery."

**Fire Hose.**—The city of Jackson, Miss., wants 1000 feet of two and one-half standard fire hose.

**Flour Mill.**—W. M. Absher Co., North Wilkesboro, N. C., wants to buy a small roller flour-mill equipment.

**Heating Apparatus.**—Heating apparatus will be wanted for church at Terrell, Texas. Address Rev. E. H. Carey.

**Heating Apparatus.**—C. C. Lewis, of Lewis, Hubbard & Co., Charleston, W. Va., is in the market for heating apparatus for store building.

**Hoisting Machinery.**—See "Mixing Plant."



Iron Foundries.—G. M. Urie, 9 East Thirteenth street, Kansas City, Mo., wants bids for the manufacture of a self-heating sad iron, made of cast iron and brass, and partly nickel.

Metal Products.—W. Staemply, Scusa S. Tommaso d' Aquina, etc., Naples, Italy, wants to correspond with manufacturers and exporters of metal products, such as pig iron, lead, copper, hides, skins, etc.

Metal-working Machinery.—L. L. Birch, Wassale, N. Y., wants machinery for turning and forming heavy wire into small articles.

Mineral Oil.—Sealed proposals, in triplicate, will be received 12 o'clock noon, February 24, for supplying about 25,000 gallons of mineral oil, as per specifications and schedule, which will be furnished on application. Preference will be given to articles of domestic production or manufacture, conditions of quality and price (including in the price of foreign productions or manufactures the duty thereon) being equal. Government reserves right to reject or accept proposals or any part thereof. Envelopes containing proposals should be marked "Proposals for Mineral Oil," and addressed to A. S. Kimball, D. Q. M. General, Army Building, New York City.

Mixing Plant.—Herbert C. Townsen, engineer North Branch dam, Peapack, N. J., is in the market for a concrete mixer, second-hand or new; steam pump to lift vertically fifteen gallons per minute 100 feet; pulso-meter, large size; two steam derricks 60-foot boom, and double-drum hoister with fly-wheel.

Piping.—The New Rapid Dry Kila Co., Box 272, Baltimore, Md., wants quotations on standard weight, one-inch wrought-iron pipe, guaranteed to stand 300 pounds hydraulic pressure to square inch; carload lots and less.

Power Plant.—C. C. Lewis, of Lewis, Hubbard & Co., Charleston, W. Va., is in the market for power plant, steam or gas, to furnish power for three elevators, 200-light incandescent machine, etc.

Pump.—See "Mixing Plant."

Railway Equipment.—Providence Coal Co., W. J. Nisbet, manager, Providence, Ky., wants a 36-inch-gauge dummy locomotive that will pull twenty or thirty mine cars up a 2½ per cent. grade for 1000 feet; weight of car and coal 3000 pounds; second-hand engine preferred.

Railway Equipment.—Valdosta Times, Valdosta, Ga., wants to buy two to six miles of 30 or 40-pound steel or iron rails and tram engine for wood or iron; will rent or buy.

Roofing.—English, Johnston & Co., Macon, Ga., want to correspond with contractors for and manufacturers of asphalt and sheet-iron roofing.

Sprinklers.—C. C. Lewis, of Lewis, Hubbard & Co., Charleston, W. Va., is in the market for sprinklers' system for large store building.

Sugar Mill.—See "Syrup Mill."

Syringes.—F. E. White, D. V. S., Norfolk, Va., wants quotations on hard-rubber syringes per gross.

Syrup Mill.—Meigs Furniture Co., Meigs, Ga., wants to buy an evaporator and cane mill of 200 gallons capacity daily and six or eight-horse-power engine.

Telephone Equipment.—Frank D. Jackson, Bartow, Fla., wants addresses of dealers in and manufacturers of telephone equipment.

Trunk-factory Machinery, etc.—B. C. Weeks, Bayboro, Ga., wants to buy trimmings and other supplies for trunk factory, second-hand pony planer, universal wood-working machine, band-saw machine, etc.

Water Works.—The city of St. Joseph, Mo., desires to correspond relative to entering into a contract for supplying it with water for a period of years commencing December 10, 1899; works to be of the gravity system; 56 miles of mains and 500 fire hydrants. Further particulars obtainable from Charles W. Campbell, city engineer.

Water Works.—Bids will be opened March 7 for the construction of water works at Oregon, Mo., according to plans and specifications on file with City Clerk Lewis I. Moore, and with the engineer, Hiram Phillips, St. Louis. Address the city clerk.

Water Works.—Proposals will be opened March 22 for the construction of water works at Greenwood, S. C., to include stand-pipe 15x100 feet, two pumps of three-quarter million capacity each, reservoir and seven miles of street mains twelve to four inches in diameter, fifty-two hydrants, valve boxes, pumping station, etc.; plans, etc., on file at office of water commissioner, Greenwood, or of Nisbet Wingfield, Augusta, Ga. Address R. M. Hays, chairman, Greenwood,

S. C. (See "Electric-light Plant" above.) (See advertisement in Manufacturers' Record.)

Wire-working Machinery.—G. F. Paddison, Eau Gallie, Fla., wants to buy fence-weaving machines that can be operated by steam power.

Wireworking Machinery.—See "Metal-working Machinery."

Woodworking Machinery.—W. M. Absher Co., North Wilkesboro, N. C., wants to buy small outfit for manufacturing doors and sash; second-hand will do.

Woodworking Machinery.—B. C. Weeks, Bayboro, Ga., wants to buy second-hand pony planer, universal woodworker, band-saw machine, etc.

Woodworking Machinery.—C. W. Rich, Crestview, Tenn., will want to buy equipment for stave mill, including engines, boilers, stave machines, dry-kilns, shafting, belting, etc.

Woodworking Machinery.—Mallard Lumber Co., Greeleyville, S. C., wants estimates on machinery for manufacturing sash and doors.

Woodworking Machinery.—J. L. Bell, Ahoskie, N. C., wants addresses of makers of machinery for turning handles, spokes and hubs.

Woodworking Machines.—Niles Tool Works, 136 Liberty street, New York city, wants machinery for turning balls for bowling alleys.

Woolen Mill.—Kern, Barr & Walter, Winchester, Va., will buy—if bargain can be had—one set forty-eight or sixty cards, with spinning to match, and four broad looms.

Woolen Mill.—C. A. Williams & Bros., Winchester, Va., will want a set of woolen machinery, including set of 60-inch cards with Bramwell feed, S. O. mule to follow (cards); wool picker, waste duster, 6-4 press, eight broad looms, beamer and 6-4 shearer.

Woven-wire Mattress Machines.—E. E. Gordon, Elba, La., wants to buy machines for manufacturing woven-wire mattresses.

## TRADE NOTES.

A Blotter.—Messrs. M. Zier & Co., of New Albany, Ind., boiler and sheet-iron workers, have undertaken to keep our desk supplied with blotters.

Cotton Mill for Sale.—The Rosalie Cotton Mills, at Natchez, Miss., are offered for sale by Mr. W. H. Shields. The plant is fully completed and ready for operation.

"Natchez," care of Manufacturers' Record, can give information regarding the desirability as an investment of the erection of a compress and warehouse at Natchez, Miss.

Heating Plants.—Messrs. Warren Webster & Co., of Camden, N. J., have closed a number of new and important contracts lately for their steam-heating systems. The contracts were placed in all parts of the United States.

Steam Shovels.—The Marion Steam Shovel Co., of Marion, O., reports that it is exceedingly busy with orders. Last month's business was nearly one-third larger than that of the best previous month in the history of the company.

Foundry and Machine Works.—The death of the owner has caused the George Foundry and Machine Works at Rome, Ga., to be placed on the market. This property offers an excellent opportunity for investment. Samuel Funkhouser, administrator, can be addressed.

Inducements for Cotton Mill.—The prosperous town of Aberdeen, Miss., is endeavoring to locate a cotton mill, and inducements are being offered to capitalists proposing the establishment of such an enterprise. Mr. J. W. Eckford can be addressed for information.

Well Drillers.—Mr. Perry Andrews, of Aiken, S. C., admitted his brother to partnership in his business, and the firm will be known as Perry Andrews & Bro. They are well equipped for the undertaking of artesian-well contracts, and can furnish full outfits and all artesian-well machinery.

Order from Europe.—The Davis & Egan Machine Tool Co., of Cincinnati, O., has just received an order from its Copenhagen office for eleven machines, including lathes, milling machines, drill press, screw machines, etc.; also received an order for several lathes from St. Petersburg, and an order for three machines from Belgium.

Woodworking Machinery.—The tenoning machine built by the H. B. Smith Machine

Co., of Smithville, N. J., are continually finding favor with new users, besides the many who have been operating them. Orders for H. B. Smith machinery are daily coming in to the company, and from present indications trade is evidently about to revive to a considerable extent. About three cable orders are received each week for the company's leading tenoner. On the 17th inst. the company's orders aggregated \$19,000 in amount.

Superior Coke and Coal.—The continued favor with which the coal and coke of the Standard Coal Co. is received is a strong testimony to the superior qualities of the product offered for sale by that concern. The Standard Coal Co. is of Brookwood, Ala., and produces a grade of foundry coke that is not excelled, and its celebrated "Milledale Seam" of coal is well known for its steaming merits, being used exclusively on the warships Pensacola and Mobile. Correspondence from foundries, factories and other users of steam is invited. The Mobile Coal Co., of Mobile, Ala., is coast agent for the company.

Foundry and Machine Works.—On February 1 Mr. M. E. Hershey, general manager of the Harrisburg Foundry and Machine Works, Harrisburg, Pa., severed his connection with that company, and Mr. W. R. Fleming, of W. R. Fleming & Co., of New York, Boston and Philadelphia, has been prevailed upon to accept the position of vice-president and general manager of the Harrisburg Foundry and Machine Works. The company contemplates to considerably increase its facilities for manufacturing automatic engines for electric service and intends to add several new lines of engines, so as to broadly cover the whole field of steam-engine practice. It is also understood that the company will rebuild its entire plant upon a plan and scope which will place it in a superior position for the manufacturing of its machinery, which is so well known throughout the country.

Building Steamboats.—Seabury & Co. and Gas Engine & Power Co., Morris Heights, New York city, have been awarded the contract for building a new steamer for the survey department of the United States government. The boat is to be used for survey work on the Yukon rivers; principal dimensions, seventy-five feet long, sixteen feet beam and three and one-half feet draft; composite construction, steel frames, deck timbers, beams, etc., planking of hard yellow pine, white pine deck, etc.; suitable cabins, deckhouse, toilet-room, galley, crew's quarters, etc., arranged conveniently for service intended. The machinery will consist of a fore and aft compound marine engine, 10 and 17½ by 10-inch stroke, and a "Seabury" patent safety water-tube boiler, adapted for burning either wood or coal; average speed will be ten to eleven miles per hour. This boat will be knocked down and loaded on cars at Morris Heights and be shipped to Seattle, where she will be set up again and be ready for service by June 1, 1898, which shows remarkably quick time for building and shipping a steamer of these dimensions and having her ready for use. This firm is also building two 32-foot steam launches, which will be equipped with fore and aft compound engines, 2½ and 2½ by 4½-inch stroke, with feed and air pump attached, of "Seabury" design, and a water-tube boiler of same design. These launches will be used in connection with the same survey service on the Yukon rivers and will be shipped complete without knocking down.

A Composite Car.—A new departure in branch line service has been inaugurated by the New England Railroad, designed to meet the new conditions brought about by trolley-road competition. The car is designed to provide cheap means of moving small bodies of passengers, so that frequent service can be given at small expense. This advance in steam motive power equipment is credited to Mr. C. Peter Clark, general manager of the New England road, and the present locomotive car was built by the Schenectady Locomotive Works. The "Composite" was built to meet this requirement of branch lines with light patronage, and is considered highly satisfactory. The car has a seating capacity for sixty passengers, and requires but two men to run it. The car body is sixty-four feet long, carried at one end by a four-wheel passenger truck, the other end resting on a locomotive frame. The locomotive proper, which is inside the forward end of the car, has four coupled driving wheels and a vertical boiler; it has cylinders twelve inches in diameter by sixteen-inch stroke, drivers forty-two inches in diameter, and the boiler carries a working steam pressure of 200 pounds per square inch. The valve motion is a modification of

the Walschaert gear. The fuel used is either anthracite coal or coke, and the water is carried in tanks hung under the car. The fuel and water supply carried on the car is sufficient for a run of sixty miles. Westinghouse air-brakes are used. The boiler is surrounded by a circular casting, on which is a groove in which rests about 125 half-inch hardened steel balls. A corresponding casting is attached to the frame of the car resting upon these balls, which allows the locomotive to swivel freely in passing curves, the same as an ordinary truck. The steam and exhaust-pipe connections pass from the boiler to the cylinder inside of this ball runway, so that these are made rigid and there are no flexible steam joints.

Exhaust Heads.—The advantages of the use of an exhaust head, although not fully appreciated by many manufacturers, are none the less real. Steam that has served its purpose in the engine cylinder becomes impregnated with oil, and coming out into the air, condenses. The effect of this is to precipitate the condensed steam (hot and oily) upon the houses of one's own or one's neighbors' properties. In summer, with open windows, the damage that may be done by this oily condensation is considerable. In winter, in northern latitudes especially, it covers everything with a coating of ice. In some parts of the Northwest the ice formation in such cases has been so great as to threaten the destruction of buildings. Another cause of complaint where exhaust steam is discharged into the air is the hammering or puffing sound with strokes of the piston. To remedy these annoyances and prevent damage has occupied the attention of engineers. Many contrivances, differing in detail, but practically built on the same general lines, have been introduced. They are called exhaust-pipe heads, or exhaust heads, because they are placed on the top of the exhaust steam pipe. They are generally of a funnel shape, with the smaller end at the bottom connected to the exhaust pipe, and are constructed of cast iron or sheet iron. Inside are various contrivances to baffle the steam, to break it up, trap the water and oil, and then allow the steam to escape. Some claim that the trouble with this form of construction is that it unavoidably develops back pressure on the cylinder, as much as five pounds back pressure being often indicated, or that the steam does not have sufficient room for expansion, but escapes carrying its entrained oil and water. Unsatisfactoriness of heads has sometimes compelled owners of plants to erect large stacks to carry the exhaust steam high into the air. And even this method, costly as it is, cannot be said to be satisfactory. The effect is simply to diffuse the condensation over a greater area. It does not trap it. The latest appliance for this purpose is an improved one, known as the "Common-sense Exhaust Head," built on lines essentially different from the old style exhaust heads. It has no baffle plates for the steam to thump against, no inverted cones, eccentric cones, complicated diaphragms or contracted discharge cylinders. In the "Common-sense Exhaust Head" the steam comes in at the top, which is the greatest diameter, allowing room for expansion immediately. As there is only one steam chamber, the entire interior area of the head is utilized as a condensing surface. The steam inlet is connected to the head tangentially, and the force of the steam entering the head at a tangent sweeps it with a rotary motion around the wall of the chamber. This rotary motion brings the particles of water, grease, etc., with which the steam is charged into contact with a very large condensing area, upon which they collect, then run, by gravity, to the drip below. The incoming steam is never brought into contact with the steam already in the head, so that all conflict and confusion is avoided, and consequently there is no noise. All sizes of this exhaust head are made in the same proportions, and are equally effective. They will take all the exhaust steam that can be shot into them, the makers claim, acting just as quietly and effectively with a twenty-inch inlet as with a two-inch inlet. Messrs. Bingham & Co., 242-46 Cherry street, Philadelphia, Pa., are the manufacturers.

## TRADE LITERATURE.

Endorsements.—The International Correspondence Schools, Scranton, Pa., has issued a brochure containing endorsements of the steam engineering courses by eighty-eight students.

Woodworking-machinery Poster.—A poster from Messrs. J. A. Fay & Co., of Cincinnati, O., manufacturers of high-grade woodworking machinery, presents a number of the

most important machines in their line, which is claimed to be the most extensive of any builders in the world.

Pamphlet "B."—A new circular has been issued entitled "Pamphlet B," giving instructions to engineers in operating the Webster system of steam heating. For copies address Warren Webster & Co., of Camden, N. J.

Steam Shovel.—A descriptive pamphlet of the "Trench" steam shovel has been issued by the builder of it, the Vulcan Iron Works Co., of Toledo, O. In presenting this pamphlet the Vulcan Company believes it is presenting to the contractor something which he has long had a wish for.

Air-compressors' Catalogue.—A booklet has been issued which is a condensed edition of the air-compressor catalogue of the Ingersoll-Sergeant Drill Co., of 26 Cortlandt street, New York city. This is a handy little volume that a great many present and prospective users of compressed air would find of much value. Copy will be forwarded on application.

Gazetteer of Power Plants.—The "American Gazetteer" of power plants in the State of Pennsylvania, to which we made reference in a recent notice, contains among other important facts the addresses of the engineers and superintendents of the power plants recorded, and, in connection with the detailed information given, special attention is desired to be called to this feature of the work. Publishers, the American Gazetteer Co., Cleveland, O.

Machine Tools, etc.—The 1898 catalogue of the Morse Twist Drill & Machine Co., of New Bedford, Mass., is ready for distribution. A full and complete line is illustrated, described and priced of twist drills, chucks, reamers, milling cutters, taps and dies and machinists' tools. A number of new tools are shown in the catalogue, including three groove-chucking reamers, hollow drills, taper-shank drills with oil tubes, straight-shank drills with oil tubes, expanding-shell reamers, face-grinding machine, bench center, etc.

Iron Works.—The general adoption of electricity as a motive power and a means of lighting created a demand for machinery especially designed for electrical work. Of the many firms which engaged in the production of the machines for electrical work, one of the most prominent is the Erie City Iron Works, of Erie, Pa. The company's catalogue is now ready, and is devoted to the line of engines, boilers, motors, etc., manufactured. The line embraces a great variety of engines and boilers suitable for mill, factory, mine and farm work. Catalogue on application.

## To Manufacturers.

As export agents of a large number of Southern cotton mills, we have extensive connections all through Santo Domingo, English West Indies, Central and South America, as well as Australia, Africa and Europe. Many of our customers take an interest in other American products, and it is therefore our intention to secure the representation of some of the most important manufacturers in such lines, with the understanding to represent only one in each line. For the purpose of extending our foreign business we have a staff of travellers and resident agents in the different countries, and we pay the manufacturers for all orders secured by them, carrying the accounts of the buyers, to whom, in many instances, long credits have to be granted. Our travellers and resident agents have a full line of samples of the goods we now handle. We only accept accounts where we are the sole agents.

If you are interested in the export business, we would be pleased to quote you our terms and conditions and give you satisfactory references.

### Resident Agents in

LONDON, RIO JANEIRO, MONTEVIDEO,  
HAMBURG, SAO PAULO, PUERTO RICO,  
COPENHAGEN, BAHIA, BOGOTA,  
STOCKHOLM, BUENOS AYRES.

**FRANK, HALBERSTADT & CO.**

Export Merchants.

Sole Export Agents of Cone Export & Commission Co.  
66 Broad Street, NEW YORK.

## FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

No advertisements but those of a financial character will be accepted for this page.

### New Corporations.

Arrangements are being made, it is stated, to organize an insurance company at Augusta, Ga., among local capitalists. The Arkansas Tontine Investment Co., of Little Rock, Ark., has been formed with \$100,000 capital. J. S. Franklin is vice-president of the company.

The Maryland Casualty Co. of Baltimore has elected J. F. Stone, president; A. Pearce, vice-president, and Robert N. Elder, treasurer and secretary.

The Chesterfield Banking & Commission Co. has been authorized to do business at Chesterfield, S. C., with \$5000 capital. E. M. and J. G. Redfearn are interested.

The Lyons Mercantile Co. has been formed at Charleston, W. Va., with \$100,000 capital, for general investment business. Among those interested are C. E. Greer, H. Levy and J. F. Hudson, all of Charleston.

The Prudential Building, Mortgage Security Co. of New Orleans, La., has issued a very attractive prospectus giving details of much value to all interested in this class of business. According to the prospectus, the company intends building homes to be paid for by the owners in monthly payments. It employs an architect to make plans for those who desire his services, and one of its features is to furnish plans and specifications for a modern home gratis. The officers of the company are J. N. Roussel, president; H. F. Lewis, vice-president, and D. G. Wire, secretary.

### New Securities.

The Commissioners' Court at Beaumont, Texas, has issued \$11,000 in bridge bonds.

It is announced that the city of Tampa, Fla., has sold \$60,000 of its bonds to Rudolph Kleybolt & Co., of Cincinnati.

Proposals will be received for an issue of \$3000 in 6 per cent. bonds by the town of Claxton, Ga., until March 10. H. R. Elmore may be addressed.

Edward S. Butts has purchased \$15,500 of 5 per cent. bonds issued by Warren county, Mississippi, at 102½. It is understood that Mr. Butts represents the Vicksburg Bank.

The proposed bond issue of Newport News, Va., will be sold on March 8. It amounts to \$140,000, and will bear interest at the rate of 4½ per cent. J. A. Massie, at Newport News, may be addressed.

The Commissioners' Court at San Antonio, Texas, has decided to issue \$51,000 in bonds for refunding purposes. The issue will bear 5 per cent. Thaddeus Smith, county clerk, may be addressed for further information.

The issue of \$100,000 in bonds of 4½ per cent., made by the city of Charleston, has been sold to C. H. White & Co., of New York, at 104.114. The bidders included firms from Baltimore, Atlanta, Cleveland, Chicago, Augusta, Ga. All the offers ranged from 100 upwards.

The Manufacturers' Record is informed that the bonds to be floated in the interest of the Hannibal Street Railway Co., of Hannibal, Mo., will soon be placed on the market. G. W. Chance, of 14 South Broad street, Philadelphia, or D. Thompson, of Hannibal, Mo., may be

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OUR FACILITIES ARE UNEXCELLED.

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addressed. The statement that these bonds have been sold is erroneous.

The city of Seguin, Texas, has determined to issue \$18,000 in bonds for water-works and street-paving purposes. They will bear 5 per cent. interest. The issue of water-works bonds has already been referred to in the Manufacturers' Record. Joseph Zorn, mayor, may be addressed.

### Dividends and Interest.

The Hope Mining Co. of St. Louis, Mo., has declared a dividend of 10 per cent.

The Mutual Loan & Building Co. of New Orleans has declared a semi-annual dividend of 4 per cent.

The Riverside Cotton Mills Co., of Danville, Va., declared dividends during the

year 1897 of 4 per cent. and 5 per cent. semi-annual.

**JOHN L. WILLIAMS & SONS,**  
**BANKERS,**  
Dealers in **RICHMOND, VA.**  
**Southern Investment Securities,**  
**MUNICIPAL BONDS A SPECIALTY.**  
Correspondence Invited.

**THE FAYETTEVILLE WATER CO.,** of Fayetteville, Ark., will receive bids on Thirty Thousand First Mortgage Refunding Bonds to run eighteen years, to bear 5 per cent. interest, paid semi-annually, guaranteed by the city. Bids received until March 20, 1898. Address **FAYETTEVILLE WATER CO., FAYETTEVILLE, ARK.**

## TO CONTRACTORS.

If you have any municipal bonds or warrants, taken in payment for building waterworks, court or school houses, jails, etc., write us. Conditions being favorable, we can use them.

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Dealers in Southern Municipal Securities,  
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**BALTIMORE.**

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## FORTY-THIRD ANNUAL REPORT.

OFFICE OF NORTHERN CENTRAL RAILWAY CO.

Baltimore, February 15, 1898.

To the Stockholders of the Northern Central Railway Co.:

The Directors respectfully submit the following report of the operations of the main line and of the railroads now operated under lease or otherwise by this Company for the year ending December 31, 1897:

EARNINGS.	
From freight .....	\$5,049,320 69
" passengers .....	1,105,295 82
" express .....	123,931 77
" mails .....	92,908 98
" miscellaneous .....	361,245 71
Total earnings .....	\$6,732,702 97
EXPENSES.	
For maintenance of way and structures .....	\$972,029 53
" maintenance of equipment .....	973,182 82
" conducting transportation .....	2,734,497 53
" general expenses .....	118,746 64
Total expenses .....	4,798,366 52
Net earnings .....	\$1,934,336 45
The gross earnings from operation of the Northern Central Railway and railroads controlled by it for the year ending December 31, 1897, were .....	\$6,732,702 97
And for the previous year .....	6,286,602 02
Showing an increase in gross earnings of .....	\$446,100 95
The expenses for the same period were .....	\$4,798,366 52
And for the previous year .....	4,643,105 01
Showing an increase in expenses of .....	\$155,261 51
The net earnings for the same period were .....	\$1,934,336 45
And for the previous year .....	1,643,497 01
Showing an increase in net earnings of .....	\$290,839 44
INCOME ACCOUNT.	
In addition to the net earnings as above stated .....	\$1,934,336 45
There was received from dividends and interest .....	319,194 00
Interest account, exchange, etc. .....	2,229 69
Interest on equipment .....	28,248 59
Proportion of loss in operating Elmira and Canandaigua Divisions received from Pennsylvania Railroad Co. ....	17,115 91
Total net receipts .....	\$2,301,124 64
From which deduct the following amounts—	
Rental Shamokin Valley & Pottsville Railroad .....	\$202,342 99
Rental Elmira & Williamsport Railroad .....	152,482 04
Rental Lykens Valley Railroad .....	34,969 92
	\$389,824 95
Interest on equipment—	
Shamokin Valley & Pottsville Railroad .....	\$4,595 01
Elmira & Williamsport Railroad .....	15,620 74
	20,215 75
	410,040 70
	\$1,891,083 94
Deduct—	
Interest on funded debt .....	\$771,695 00
Interest on real estate mortgages and ground rents .....	21,050 32
Interest on car trusts .....	41,406 79
Taxes .....	55,863 59
Sundry expenditures .....	13,932 59
Payments on account of Elmira & Lake Ontario Railroad Co.—	
For interest on bonds .....	\$25,028 37
For taxes .....	21,860 75
For interest on equipment .....	17,375 45
	64,264 57
	968,212 86
Balance to credit of Income Account for 1897 .....	\$922,871 08
Out of which were paid cash dividends of 7 per cent. ....	526,267 00
Leaving amount to be transferred to credit of Profit and Loss Account for 1897 .....	\$396,604 08
Amount to credit Profit and Loss Account December 31, 1896 ..	\$2,050,379 13
Add net amount realized from adjustment of old accounts, etc. ..	33,145 73
	2,083,524 86
Balance to credit of Profit and Loss Account December 31, 1897 .....	\$2,480,128 94

The total number of passengers, irrespective of the divisions over which they were carried, the passenger mileage, and the revenue from the same, on all lines of the Company, were:

	Passengers.	Passengers one mile.	Earnings.	Rate per passenger per mile.
1897 .....	3,913,022	52,338,019	\$1,105,295 82	2.112
1896 .....	3,848,833	51,156,008	1,094,518 54	2.140
Increase .....	64,189	1,182,011	\$10,777 28	.028
Decrease .....				
Percentage .....	1.67	2.31	0.98	1.31

The total number of tons, irrespective of the divisions over which they were moved, the tonnage mileage, and the revenue from the same, on all lines of the Company, were:

	Tons.	Tons one mile.	Earnings.	Rate per ton per mile.
1897 .....	14,580,225	962,244,791	\$5,049,320 69	.525
1896 .....	13,253,431	885,552,906	4,767,227 35	.538
Increase .....	1,326,794	76,691,795	\$282,093 34	.013
Decrease .....				
Percentage .....	10.011	8.690	5.917	2.416

The aggregate movement of bituminous coal was 3,256,656 tons, an increase of 640,058 tons, and of anthracite coal 3,924,379 tons, an increase of 49,940 tons. The tonnage of both classes amounted to 7,181,026 tons, as against 6,491,028 for the preceding year, being an increase of 689,998 tons in the actual aggregate of coal transported, irrespective of the number of divisions over which it was moved.

The amount of grain received at the elevators at Canton, as compared with the previous year, was:

1897 .....	24,716,349 bushels.
1896 .....	14,662,337 "
An increase of .....	10,054,012 "

The amount of grain received at the local elevator, No. 2, in the city of Baltimore during the year was 1,759,317 bushels, as against 1,441,223 bushels in 1896.

The principal items of tonnage, besides coal and grain, were lumber, iron ore, manufactures of iron, and petroleum.

The Real Estate Account shows a decrease of \$11,485.65 for the year, as follows:

Dr.	
Purchase of property in Baltimore for Jackson's Wharf Station .....	\$20,500 00
Purchase of land in Millersburg .....	600 00
Recording deeds, conveyancing, etc. ....	564 35
	\$21,664 35
Cr.	
By amount received for property in Baltimore transferred to Philadelphia, Wilmington & Baltimore Railroad and Union Railroad .....	\$33,150 00
Net reduction Real Estate Account .....	\$11,485 65

The only charge to Capital Account during the year was that of \$282,450, being one-half the cost of 1256 long gondola cars, which had been purchased under the terms of Series C of the Pennsylvania Equipment Trust. The last certificates of that series having matured and been paid during the year, these cars now form a portion of your regular equipment.

The second track was completed between Goldsboro and New Cumberland, on the Baltimore Division, a distance of eight miles, and between Georgetown and Herndon, on the Susquehanna Division, a distance of three miles, thus making the entire Main Line between Baltimore and Sunbury double-track, with the exception of the gap between Bridgeport and Marysville, a distance of five and one-half miles, over which no passenger traffic passes. Additional sidings were laid at Halifax and Herndon, and improvements made in the yard tracks and transfer at Sunbury, through which the traffic is handled more economically and effectively at that point.

The work of renewing the bridges and trestles was further continued on the various divisions, 672 feet of steel and other permanent bridges being substituted for lighter structures. The most important of these improvements was on the Canandaigua Division, where a Howe truss bridge and wooden trestle were replaced by a steel bridge 152 feet in length and four spans of steel deck girders, each fifty-two feet long, making a total of 368 feet. The piers and abutments were also rebuilt of stone and the alignment improved.

There was a net increase in track and sidings of seventeen miles. There were 7906 tons of new steel rails and 253,129 cross-ties used in construction and repairs, and additional sections of the road were ballasted with stone and cinder.

Frame combined passenger and freight stations were erected at Monkton and Marysville, and a brick passenger station at Millersburg.

Seven locomotives having been sold or condemned were replaced by new standard power. There was no change in the passenger equipment. There were 134 freight cars built to replace vacant numbers, and the equipment was increased through the car trust arrangement already referred to.

The terminal facilities at Baltimore were enlarged through the purchase of adjacent properties at Jackson's Wharf and the lease by the Terminal Warehouse Company of the Miller's Wharf and warehouse property.

In accordance with the terms of the Consolidated General Mortgage, the amount of bonds outstanding thereunder was reduced by the drawing, July 1, 1897, through the operation of the Sinking Fund, of \$138,000 of Series A and B.

Dividends amounting to 7 per cent. were paid during the year, and a considerable surplus carried to the credit of Profit and Loss.

Your Board have to regret the loss of three of their most valued members, Col. E. B. Parsons, Mr. Louis W. Hall and Mr. Henry James. Mr. James was a prominent merchant of the city of Baltimore, a man of high integrity and ability, and had given to your affairs conscientious and valuable service from his election in 1884 until his death at Baltimore on July 27, 1897.

Mr. Hall, who had been one of your Directors since 1888, died suddenly at Harrisburg on the 12th of July, 1897. He was a lawyer of eminent ability, and his legal attainments made his counsel of special service in connection with your affairs.

Col. Enos B. Parsons died at Asheville, N. C., May 6, 1897. He had served with distinction in the Union Army during the civil war, became thereafter engaged in business pursuits, and was elected a Director in 1889. His frank and genial manner won the friendship of his associates, and his faithful discharge of duty attested his devotion to your interests.

Mr. M. H. Arnot was elected to fill the vacancy caused by the death of Colonel Parsons, Mr. Wayne MacVeagh to fill that caused by the death of Mr. Hall, and Mr. Michael Jenkins to fill that consequent upon the death of Mr. James.

Since the close of the year your Company has also lost by death, on the 29th of January, 1898, its Purchasing Agent, Mr. A. W. Sumner. Mr. Sumner had been in your service since 1864, and had been officially connected with your Purchasing Department from 1875 until his death. He performed the duties of that responsible office with the utmost fidelity and ability, and possessed qualities which especially fitted him for the successful administration of his office.

In accordance with the revised organization, Mr. Charles A. Chipley was appointed General Freight Agent in charge of local traffic, and Mr. John B. Thayer, Jr., General Freight Agent in charge of through traffic, taking effect March 10, 1897, and Mr. Arthur Hale, Superintendent of Telegraph, January 1, 1898.

The following statements of the Treasurer accompany this report: Income Account, General Financial Statement, and Statement of Bonds and Stocks owned by the Company. There is also appended to the report the Statement of the Insurance Fund. Your attention is also called to the reports of the General Manager and Auditor, showing in detail the operations of the year.

The Board takes great pleasure in acknowledging the zeal and fidelity shown by the various officers and employees in the discharge of their duties during the past year.

By order of the Board of Directors.

FRANK THOMSON,  
President.

# Alphabetical Index of Advertisers.

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Austin White Lime Co. .... 6	Birmingham Boiler Works. .... 9	Davis, G. M., & Son. .... 9	Dixon, Jos., Cracible Co. .... 36	Eckford, J. W. .... 20	Fay, J. A., & Co. .... 25	Garrett, C. S., & Son. .... 23	Hartley's Boiler Works. .... 15	Interstate Law Association. .... 20	Jewell Belting Co. .... 10	Keystone Drop Forge Co. .... 8	Lanier Manufacturing Co. .... 26	Manistee Iron Works. .... 31	Morse Twist Drill & Mch. Co. .... 12	Murray, James, & Son. .... 32	Porter, H. K., & Co. .... 13	Queen City Supply Co. .... 16	Reid, Thorman. .... 6	Sanderson, John. .... *	Simpson, J. S. & G. F. .... 33	Southern Real Estate Exchange. .... 20	Stewart, Jas., & Co. .... 6	Thayer, J. A., & Co. .... 20	Wagon Wheel Co. .... 32		
	Birmingham Boiler Works. .... 9	Dean Bros. Steam Pump Works. .... 30	Dixon, Jos., Cracible Co. .... 36	Eckford, J. W. .... 20	Fay, J. A., & Co. .... 25	Garrett, C. S., & Son. .... 23	Hartley's Boiler Works. .... 15	Interstate Law Association. .... 20	Jewell Belting Co. .... 10	Keystone Drop Forge Co. .... 8	Lanier Manufacturing Co. .... 26	Manistee Iron Works. .... 31	Morse Twist Drill & Mch. Co. .... 12												



## PROPOSALS.

**TREASURY DEPARTMENT.** Office Supervising Architect, Washington, D. C., February 2d, 1898.—Sealed proposals will be received at this office until 2 o'clock P. M. on the 24th day of February, 1898, and opened immediately thereafter, for furnishing all the labor and materials and erecting complete two hydraulic passenger elevators, one hydraulic mail lift and one hydraulic ash lift, including pumps, tanks, piping, cars, platforms, etc., for the U. S. Court House, Custom House and Postoffice Building at Omaha, Nebraska, in accordance with the drawings and specification, copies of which may be had at this office or the office of the Superintendent at Omaha, Nebraska. The right is reserved to reject any or all bids, and to waive any defect or informality in any bid, should it be deemed in the interest of the Government to do so. Proposals must be enclosed in envelopes, sealed and marked "Proposal for two Hydraulic Passenger Elevators, one Hydraulic Mail Lift and one Hydraulic Ash Lift, for the U. S. Court House, Custom House and Postoffice building at Omaha, Nebraska," and addressed to the Supervising Architect.

**TREASURY DEPARTMENT.** Office Supervising Architect, Washington, D. C., February 10th, 1898.—Sealed proposals will be received at this office until 2 o'clock P. M. on the 8th day of March, 1898, and opened immediately thereafter, for furnishing all the labor and materials and fixing in place complete the boiler plant, low-pressure exhaust steam heating mechanical ventilating apparatus, cold and hot water supply system, etc., and fire pump required for the U. S. Postoffice, Court House and Custom House building at Milwaukee, Wisconsin, in accordance with the drawings and specification, copies of which may be had at this office or the office of the Superintendent at Milwaukee, Wisconsin. The right is reserved to reject any or all bids, and to waive any defect or informality in any bid should it be deemed in the interest of the Government to do so. Proposals must be enclosed in envelopes, sealed and marked, "Proposals for Boiler Plant, etc., Cold and Hot Water Supply, etc., system for the U. S. Postoffice, Court House and Custom House building at Milwaukee, Wis." and addressed to the Supervising Architect.

**SEALED PROPOSALS** will be received by the Board of Water Commissioners of Greenwood, S. C., until twelve (12) o'clock noon, March 22, 1898, for constructing a complete system of Water Works and Electric Light Plant and furnishing material for same.

Work will consist of a stand pipe 18x100; two pumps of three-quarter millions capacity each; reservoir and seven miles of street mains 12 to 4 inches in diameter; fifty-two (52) hydrants; valves, valve boxes, pumping station, etc.; an arc light machine of fifty (50) light capacity; an incandescent light machine of one thousand (1000) light capacity; forty (40) arc lamps in place; engine; switch board, etc. Proposals will be received on the whole or any of the sub-divisions as shown by the specifications. Each proposal must be accompanied by a certified check and must be on blank form which will be furnished by the city. A bond of 20 per cent. of the contract will be required.

Plans and specifications will be on file and may be seen at the office of the Water Commissioner in Greenwood, S. C., and also at the office of Nisbet Wingfield, Consulting Engineer, Augusta, Ga.

The Board of Water Commissioners reserves the right to reject any or all bids.

R. M. HAYS, Chairman.

J. F. DAVIS,

A. ST. CLAIR LEE,

Commissioners of Public Works.

### Bids Wanted on 20,000 to 30,000 Tons Steam Coal.

2240 lbs. to ton, free on board Baltimore. Give analysis and also name of coal and mine from which taken or supplied. Address immediately

U. S. C. T.,

Care Manufacturers' Record.

## SEALED PROPOSALS.

### \$140,000 Sewer, Jail and City Bonds.

Sealed proposals will be received by the Common Council of Newport News, Va., until 12 noon, March 8, for the purchase of \$140,000 4% percent. Sewer, School and Jail Bonds.

Interest payable semi-annually at the Treasurer's office in the city of Newport News or The Bank of New York, N. B. A., New York City. Principal payable in 30 years, optional after 20 years. Denomination \$500. Dated April 1, 1898. Address all bids to City Clerk, marked Bids for City Bonds. Council reserves the right to reject any or all bids.

J. A. MASSIE, City Clerk.

### WATER AND LIGHT PLANT, HOLLY SPRINGS, MISS.

The Board of Mayor and Aldermen of Holly Springs, Miss., will receive sealed proposals till 8.30 P. M. March 25th, 1898; for furnishing materials and constructing a water and light plant, embracing either or all of the following items:

- A. Tower, tank and structural steel.
- B. Two horizontal tubular boilers and heater.
- C. Deep well lift.
- D. Compound duplex pump.
- E. Compound high-speed, or simple 4-valve Steam Engine.
- F. Sixty K. W. alternator and station equipment.
- G. About 570 tons 4-10 in. cast iron pipe and specials.
- H. Hydrants and valves.
- I. Brick central station.
- J. Receiving basin and foundation.
- K. Boiler setting.
- L. Installing steam machinery.
- M. Electrical construction.

Each proposal is to be accompanied with a deposit of 3 per cent. of the amount of the bid. The right is reserved to reject any or all bids. For blank forms and specifications address

SAM. FINLEY, Mayor,

Holly Springs, Miss.

WALTER G. KIRKPATRICK, Engineer,

Jackson, Miss.

## CHARLESTON, S. C.

Is showing great Commercial Development.

**For Sale—Residences, Building Lots, Farms, Manufacturing and Hotel Sites.**

An ideal city for a HOME. Full of historic interest. Cost of living is cheap and climate delightful. Educational facilities are unsurpassed.

Garden produce of farms near Charleston is shipped to Northern and Eastern markets at good profits.

Exchange Banking & Trust Company,  
CHARLESTON, S. C.



## Remington Standard Typewriter

and consider—First, the Material; Secondly, the Design; Thirdly, the Workmanship—and you have three good reasons for its acknowledged Durability, Simplicity and Capacity for Continuous Hard Work

WYCKOFF, SEAMANS & BENEDICT  
327 BROADWAY, NEW YORK

It costs only  
15 Cents a  
year to own one.

THE BEST ON EARTH.  
Patented January 5, 1897;  
others applied for.

THE HARTZELL  
Self Draining Hose Reel.

It will last twenty years and  
it sells at

\$2.50

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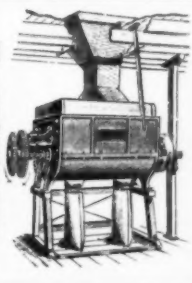
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EACH.

It is rigidly, scientifically and mechanically constructed. It drains out all the water. It keeps the hose in good order. The hose is not kinked, twisted, crushed or drawn to a tension as it is easily unreeled. It sells at sight. For catalogue and lists address

The Hartzell Novelty Works, Alliance, O., U. S. A.

THE BROUGHTON  
DRY MIXER  
FOR  
Hard Plaster, Cement, Paint, &c.  
W. D. DUNNING,  
96 W. WATER ST., SYRACUSE, N. Y.



THE BOOMER & BOSCHERT  
KNUCKLE JOINT

**PRESS**  
FOR BALING  
Cloth, Paper, Yarn, &c.  
Or for any other purpose requiring great pressure.  
BOOMER & BOSCHERT PRESS CO.  
888 W. WATER ST., SYRACUSE, N. Y.

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ELECTRIC CLOCK.

Indorsed by all Insurance Companies. Write for Catalogue.  
ECO MAGNETO CLOCK CO.  
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Enhance the Value of Property One-Third.

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20,000,000 square yards laid in eighteen years.

For plans and estimates apply to

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XX Good Quality 6 1/2 size Envelopes Printed in lots of 10,000 for \$1.00 per M.; Printed in lots of 5,000, \$1.20 per M.; Printed in lots of 25,000, 95c. per M. Freight paid when money accompanies the order. All other qualities and sizes at prices equally as low. Write for samples. ATLANTA ENVELOPE CO., Atlanta, Ga.

**Bachelder Adjustable Spring Steam Engine Indicator and Ideal Reducing Wheel** make a complete outfit. Grimm's Injector Blower Tube Cleaner, Soot Sucker Tube Cleaner. Thompson's Sectional Dumping Bar. Send for description and prices.

**THOMPSON & BUSHNELL, 120 & 122 Liberty St., New York.**

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### UNLIMITED ELECTRIC POWER

in large or small units for manufacturing purposes. Columbia is in the centre of the cotton producing country. Low freight rates to all points. An ideal manufacturing location.

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**WM. C. HAWKINS, Managing Engineer, Columbia, S. C.**

Do You Want to BUY

"The Columbia" Modern Laundry Machinery

Is the Cheapest and Best.

Latest "Up To Date"

Prices "Right"

**WILSON LAUNDRY MACHINERY CO.**

Send for Catalog R.

COLUMBIA, PA.

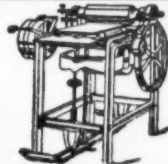
A. WALKER, President.

M. B. FRYMAN, Secretary.

**S. H. SINCLAIR CO.**

Manufacturers of

**LAUNDRY MACHINERY.**



"THE SINCLAIR" IRONER

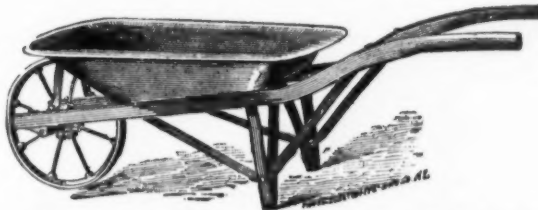
Is the First and the Best.

8-10 S. Canal St. CHICAGO.

Write for prices and catalogue

## JACKSON MANUFACTURING CO.

Harrisburg, Pa., U. S. A.



## Manufacturers STEEL BARROWS

.. of ..

For Mills, Furnaces, Mines, Farms, Railroads.

**MINING CARS, CHARGING BARROWS, WIRE ROPE THIMBLES.**

Orders received through any reliable commission house.

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For Hand, Belt and Electric Power.  
Lag Screws, Carriage and Machine BOLTS,  
Drift Pins and all kinds Special BOLTS  
made by

**PARKHURST BROS. & CO., - Indianapolis, Ind.**

## CINCINNATI ELEVATOR WORKS,

Manufacturers of

Hand, Steam, Hydraulic and Electric

## ELEVATORS

216 West Second St., CINCINNATI OHIO.

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**MORGAN SPRING CO., Worcester, Mass.**  
Spring Makers. Solicit our prices.

## Janney & Steinmetz,

DREXEL BLDG., PHILADELPHIA.

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Manufactured Shapes, Forgings, Etc.

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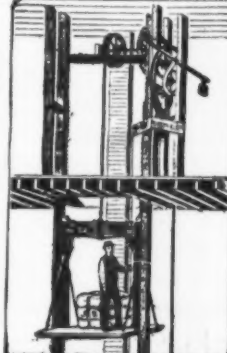
M. BRADFORD, Supt.

82 Bank Street, NORFOLK, VA.

Legitimate work solicited in any part of the country. Write for references.

BATES' HAND ELEVATORS,

Pat. April 18, 1871. Released July 25, 1875.  
OVER 10,000 IN USE.



Adapted for Warehouses, Stores, Factories, Hotels, Public Institutions and every place where merchandise, &c., is transferred from one story to another.

**JAMES BATES' SONS,**

Successors to JAMES BATES,  
Cor. PRATT and PRESIDENT STREETS  
BALTIMORE, MD.

## SPECIAL Advertisements OF GENERAL Interest.

OPPORTUNITIES FOR INVESTORS.

### Knitting Mills for the South.

Mr. W. G. MAXWELL, of the Wool Exchange Building, New York, one of the founders of Roanoke Rapids, N. C., and organizer of the first knitting mill company there, is prepared to introduce this industry at any favorable point in the South with the utmost speed and perfection.

The knitting mill at Roanoke Rapids has been a wonderful success, and is now running night and day.

The South is beginning to feel the competition of her own cotton mills, but the knitting industry has there a comparatively free field, and this is the time to enter it with certainty of large profits.

Mr. Maxwell will be pleased to correspond with individuals, corporations or municipal bodies upon the subject.

#### ATTENTION, MANUFACTURERS!

A magnificent plant, ready to be converted easily into a

### YARN, HOSIERY, KNITTING MILL

or any other kind of a  
**MILL or PLANT.**  
Situating in best portion of Piedmont section of Western North Carolina. Main building 100 by 50 feet, solid brick, slate mansard roof, five full stories, steam elevator, good power, plenty of cheap labor. Will put plant into a stock company, or against money or machinery, or both, to operate it in any good line.  
Situating in a good town, with splendid climate, water, electric lights and railroad facilities. Full particulars by addressing  
PLANT, care Manufacturers' Record.

**VALUABLE COTTON MILL  
FOR SALE.**  
The undersigned offers for sale the  
**ROSALIE MILLS COMPANY'S PROPERTY**  
at Natchez, Miss.,  
including buildings, tenements and machinery.  
Production 3000 pounds per day.  
Machinery of latest design and in first-class order.  
Address for particulars and terms  
**W. H. SHIELDS,**  
Natchez, Miss.

There is a good opening for a Compress and Warehouse, "built under requirements of insurance companies" at Natchez, Miss. Gross receipts of cotton to date 100,000 bales, net 79,000.

It is estimated a new railroad now contemplated will increase receipts 20,000 bales.

For further information address  
**NATCHEZ,** care Manufacturers' Record.

### A Good Chance for a Cotton Factory.

30 acres with ample buildings, one 100-horsepower steam engine and boiler. The above property is all new and is known as the Shreveport Fair Grounds. Address  
**E. M. SMITH,** Shreveport, La.

**FINE COTTON FACTORY SITE FOR SALE.**  
Situating on main line of railroad near a never-failing and abundant water supply; healthful locality; schools and churches of all denominations; convenient to banking institutions; no city taxes, but near enough to have all city advantages; can be purchased outright or value of site taken in mill stock; no better location can be found; price reasonable. Address  
**JULIAN M. BAKER,** Tarboro, N. C.

### A New Hosiery Mill.

Capacity over 100 dozen a day. Has not been run two years. Cost \$14,000. Will sell for \$8000 cash. Apply to  
**W. K. DANA,** Westbrook, Maine.

**WANTED.**  
To communicate with a party, capable of running any kind of wood-working machinery in connection with ginney and electric light plant, who has two thousand dollars or more to invest. Party to take charge of and operate the entire plant. A good opening for a competent man. For particulars address **W. K. NETTLES,** care The Magnolia Gin & Light Co., Magnolia, Miss.

**FOR RENT.**  
**Desirable Brick Yard.**  
Equipped for business on James River, Va.  
**T. F. ROGERS,**  
Norfolk, Va.

**WANTED.**  
**A PARTNER**  
in a well-established wagon manufacturing business, situated in a progressive Southern city of 20,000 inhabitants. \$6000 buys a half interest. Money is needed to increase the plant so as to take care of increasing business.  
For further information address **W. P. H.** care Manufacturers' Record.

**VALUABLE WATER-POWER  
FOR SALE.**  
In the Piedmont section of North Carolina on the Southern Railway and the South Yadkin River. Full copy of engineers report sent on application.  
**FRANK C. HAIRSTON,**  
Davie Co. Fork Church, N. C.

**WATER POWER  
FOR SALE.**  
Waterfall River falls 51 feet through Wateree boat canal, producing many thousands of horsepower. Massive granite locks in good repair. Four miles from railroad. Near Camden, S. C.  
Correspondence and inspection invited.  
**S. LOGAN LANG,**  
CAMDEN, S. C.

**NOTICE.**  
We mine, manufacture, buy and sell all kinds of mineral paints, dry colors, minerals and clays. **ALPHA PAINT AND MINERAL CO.,** 338 Bourse Building, Philadelphia, Pa.

**SPECIAL COMMISSIONERS' SALE  
OF THE  
Norfolk and Ocean View Railroad**  
3 1/2 Miles Norfolk to Ocean View;  
Standard Gauge; Electric Power;  
**ITS PROPERTY AND FRANCHISES,**  
including the Ocean View Hotel Property.  
Pursuant to a decree of the Circuit Court of the United States for the Eastern District of Virginia, we shall sell at PUBLIC AUCTION in front of the Custom-House, Norfolk, Virginia, on **Wednesday, the 23d Day of March, 1898, at 12 O'clock M.,** the above referred to property.  
For further information apply to **W. W. OLD, CALDWELL HARDY,** Special Commissioners, NORFOLK, VA.

### RADFORD, Virginia.

Parties desiring to start new enterprises or change location are invited to investigate Radford, Va. Good climate, water and drainage, elevation, 1800 feet. On Norfolk & Western Ry. at junction of Columbus, O., and Pocahontas Coal Fields divisions, as well as Southern connection via Knoxville, Tenn. In midst of fine agricultural country and 25 miles from ore fields. Population, 4000, churches, public and private schools, electric light and car line. Ice plant and other manufactures.  
Responsible parties are offered inducements, including no city taxes for five years. Address  
**G. T. KEARSLEY,**  
Secretary Board of Trade,  
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**Corporation Laws of West Virginia  
Are the Best.**  
Charter is good in any state, no liability, signers furnished saving you \$40, consultation free.  
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CHARLESTON, W. VA.

**Incorporate Your Business.**  
**West Virginia Laws Most Liberal.**  
**No Personal Liability. Non-Assessable Stock.**  
Plan mailed on application.  
**J. A. THAYER & CO., Attorneys,**  
Charleston, W. Va.

**RARE OPPORTUNITY.  
FOR SALE.**  
An  
Up-to-Date  
**Foundry & Machine Shop,**  
AT ROME, GA.

Owing to the death of the owner, and the consequent necessity of winding up the estate for distribution, the **J. A. George Foundry and Machine Works**, of twenty years' standing, with an established and remunerative patronage, are offered for sale at a bargain. The business is now being run successfully by the administrator of the estate.  
Address for price, terms and particulars.  
**SAM'L FUNKHOUSER, Administrator,**  
ROME, GA.

**BY SPECIAL MASTER.**  
**SPECIAL MASTER'S SALE.**

**MRS. MARY G. T. STEMPEL,**  
Guardian,  
VS.  
**THE NEW CONSUMERS' ICE COMPANY, LIMITED.**

No. 12,625, in the United States Circuit Court for the Eastern District of Louisiana, New Orleans Division—  
In Equity.

IN PURSUANCE OF DECREES RENDERED Dec. 10, and signed Dec. 23, 1897, by the Hon. Don A. Pardoe, Judge of the United States Circuit Court for the Eastern District of Louisiana, New Orleans Division, in the above entitled and numbered cause, and of an order granted by said court and to me directed, bearing date Jan. 24, 1898, I will sell at public outcry to the last and highest bidder for cash on the premises, on Magazine street, between Julia and Girod streets, in the City of New Orleans, La., on **MONDAY, THE 28TH DAY OF FEBRUARY, 1898,** beginning at 11 o'clock a. m., the following described property, to-wit:

1. A CERTAIN PIECE OR PORTION OF GROUND, with the buildings and improvements thereon, including all the machinery, engine, fixtures, apparatus and the appurtenances for the manufacture of ice therein contained, and all rights, ways, privileges and appurtenances thereunto belonging or in anywise appertaining, situated, lying and being in the First District of this city, in the square bounded by Magazine, Julia, Girod and Camp streets, and measuring two hundred and twenty-four (224) feet one inch front on Magazine street, the same width in the rear, by one hundred and seventy feet and five inches in depth, between parallel lines, according to a sketch or certificate under date of March 18, 1888, and annexed for reference to an act of mortgage from Consumers' Ice Company to W. J. Behan, before Andrew Hero, Jr., bearing date July 3, 1886.

2. A CERTAIN LOT OF GROUND, situated, lying and being in the First District of this city, in the square bounded by Camp, Magazine, Girod and Julia streets, being square No. 102, measuring, more or less, thirty (30) feet front on Magazine street by a depth between parallel lines of one hundred and sixty (160) feet, all French measurement, together with all the buildings and improvements thereon, rights, ways and advantages thereunto belonging or in anywise appertaining; the buildings and improvements designated by the No. 141 Magazine street; said lot of ground herein conveyed being the upper half of that certain piece or lot of ground measuring in French measure sixty (60) feet front on said Magazine street by the aforesaid depth of one hundred and sixty (160) feet, between parallel lines, which larger lot of ground the congregation of the Roman Catholic Church of St. Patrick acquired from the Society of the Roman Catholic Church of the Archdiocese of New Orleans by an act passed before Octave de Armas, a notary public in this city, under date of 19th of August, 1871; the said property being the same acquired by the Consumers' Ice Company from David Close by act before Samuel Flower, notary, on the 27th day of September, 1892, registered in the conveyance book No. 143, folio No. 394.

For further particulars see decrees on file in the United States circuit clerk's office at New Orleans, La.  
**ALCEE LE BLANC, Special Master.**

**ROBERT WARE GRASTY,**  
Attorney and Counsellor-at-Law,  
EQUITABLE BUILDING,  
ATLANTA, GA.

General law practice. Collections, loans, money invested, options secured and information furnished concerning Southern properties of all kinds.

**ABERDEEN, MISS.,**  
is a prosperous, enterprising and growing town in the heart of one of the most fertile and productive sections of the United States. Its possibilities are wonderful and by proper effort and push it can be made a manufacturing and commercial centre. Aberdeen  
**Wants a Cotton Factory.**

Eastern Capital can find Capital in Aberdeen to help establish a big Cotton Mill in the centre of the Cotton Belt of Mississippi. Correspondence solicited. Write to

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Aberdeen, Miss.

**FOR SALE.**  
**Up-to-date Wheel Factory**  
in one of the best Southern cities. 5 railroads. Capacity 150 sets of wheels per day. 30,000 finished spokes per day. Best of material right at door at cord-wood prices. Address  
**P. O. BOX L,**  
Meridian, Miss.

**AGENTS WANTED—To Sell the  
"Battle Ax" Hay Press.**  
Latest invention, Automatic, Ball Bearing, Compound Leverage, Self Contained. No gear wheels or springs. Full circle, Simple in construction, efficient in service. Write, prices, discounts.  
**ALABAMA FOUNDRY & MACHINE WORKS,**  
NEW DECATUR, ALA.

**WANTED.**  
**Machinery to Manufacture**  
We have a thoroughly equipped Machine shop, Carpenter Shop and Foundry, and can do all classes of Machine Work very reasonable. Try us.  
**SOUTHERN FOUNDRY & MACHINE WORKS,**  
FREDERICKSBURG, VA.

**FOR SALE.**  
**7000 Acres of Yellow Pine Timber  
Lands, on the Georgia Coast.**  
Address **W. A. WILLCOX,** Darien, Ga.

For Sale to Close Out Business.  
**26,000 ACRES OF LAND,**  
From 4 to 16 miles from Summerville, S. C. a noted health resort, containing long and short leaf pine, oak, hickory, ash, cypress, etc. Contains excellent farming and pasture land, and is convertible into a game preserve. Also second-hand machinery in good order.  
**A. W. TAYLOR LAND & LUMBER CO.,**  
SUMMERVILLE, S. C.

**TIMBER LAND.**  
**21,000 Acres** Virgin Forest in best timbered section of West Virginia. Experts measured off several one acre blocks on N., S., E. and W. portions of this tract, and then measured the timber thereon, using Scribner's Lumber and Log Book. Best acre measured 80,027 feet B. M.; thinnest acre, 19,954 feet; general average, 39,371 feet per acre, divided as follows, viz: Hemlock, 19,016 feet; Spruce, 11,358 feet; Cherry, 3,778 feet; Maple, 2,077 feet; Birch, 1,213 feet; Sugar, 948 feet; Ash, 794 feet; Beech, 818 feet, and Cucumber, 270 feet. Total amount of merchantable timber on this tract (approximated)

**863,962,000 FEET.**  
The Title is Guaranteed to be Absolutely Perfect. Price and terms very reasonable. Sworn statement of the experts and detailed information sent upon application to **THE SOUTHERN REAL ESTATE EXCHANGE,** Clarksburg, W. Va.



**JUSTICE COX, JR.**  
552-554 Builitt Bldg., Phila.,  
Agent for  
Pulaski Iron Company.  
Brier Hill Iron & Coal Company.  
Lebanon Valley Furnace Company.



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Advertisements under this head are inserted free of charge for readers of the MANUFACTURERS' RECORD. Advertisements must not exceed five lines—about thirty words—and four insertions will be given without charge.

**WANTED.**—At once, by mill of 10,000 spindles, a reliable man as superintendent, middle age, experienced in manufacture of cotton plaids and sheetings. Parties must give reference as to ability, etc. Address P. O. BOX 190, Tuscaloosa, Ala. m18

**WANTED.**—Superintendent for new underwear mill making plain and ribbed cotton underwear; making a specialty of summer goods. Address J. C. Collier Co., Barnesville, Ga. m18

**WANTED.**—To secure the services of a practical slate expert in the capacity of superintendent or foreman. Address Jackson, Meshier Mining Co., 40 1/2 Whitehall St., Atlanta, Ga. m18

**WANTED.**—Traveling salesmen on salary or commission to sell our steel pens to offices, banks and stationers. Agents need apply. Address SPOT CASH PEN CO., Boston, Mass. m18

**WANTED.**—Capable, reliable, enterprising business man to take entire control of novel device for advertising. Small capital required to push device, not to buy it. Address ADVERTISER, care Manufacturers' Record. m18

**WANTED.**—An expert candy and chewing gum maker. Address L. C. Y., care Manufacturers' Record. m18

**WANTED.**—An experienced and practical man in the manufacture of soap. Address SOAP, care Manufacturers' Record. m18

## SITUATIONS WANTED.

Advertisements under this head are inserted free of charge for readers of the MANUFACTURERS' RECORD. Advertisements must not exceed five lines—about thirty words—and four insertions will be given without charge.

**WANTED.**—A position by man who has had twenty-five years' experience in railway service; understands construction and track work, and engineer as well as traffic work, also telegraphing. Unquestionable reference furnished if required. Address RAILROAD, care Manufacturers' Record. m18

**WANTED.**—Situation as superintendent or foreman of machine shop; twenty years' experience in some of the best plants East. Reasons for change given. Address JOSEPH McCLELLAN, Engineer No. 7 Hartford Fire Department, Hartford, Conn. m18

**CHEMIST.** experienced in the care of machinery; for the last three years in charge of a large plant. Wants a position as superintendent, manager or assistant. Address H. C. C., care Manufacturers' Record. m18

**WANTED.**—Miller of 17 years' experience as head miller in late improved mill would like to correspond with some mill company who would give fair wages to miller capable of taking charge of mill of 100 to 1000 bbls. capacity. Address FLOUR MILLER, 222 Gillis St., Kansas City, Mo. f25

**WANTED.**—Young man of experience wants position as stenographer or assistant bookkeeper; good references; moderate salary to start. Address C. W. B., 403 Fatherland St., Nashville, Tenn. f25

**WANTED.**—Situation as saw mill manager and operative with 15 years experience, prefer the South. P. O. Box 77, Easton, Md. f25

**WANTED.**—By a practical die, tool and jig maker. Has designed and made dies, tools, special machinery, fixtures, etc. for clock, typewriter, sewing machine, bicycle and general hardware work. Well educated, best of references, capable of taking charge. Address DIE WORKER, care Manufacturers' Record. f25

**TRAVELLING SALESMAN** throughout N. E. and Middle States, with permanent office on Broadway, N. Y., would like one or more good novelties; exclusive agency in above territory preferred. Address P. O. BOX 1048, New York, N. Y. f25

**WANTED.**—A position as bookkeeper by an experienced man of forty-five; now has a position but desires to change; no set of books to intricate; best of reference given. Address "C. J. B." 217 N. 21st St., Birmingham, Ala. f25

**WANTED.**—By a Northern Railroad man a position as superintendent or train master on some new road or with a lumber company operating railroad line; thoroughly understand transportation, operating and construction; best of recommendations. Address JACOB S., care Manufacturers' Record. m18

**WANTED.**—By an architectural draughtsman, who is practical, steady and industrious; married; would like a steady position. Address E. A. S., 624 E. 15th street, Sedalia, Mo. m18

**A COLLEGE graduate**, with five years' experience in teaching, desires position as teacher; can give good references. Address COLLEGE GRADUATE, care Manufacturers' Record. m18

**A SALESMAN**, visiting the trade of Virginia and West Virginia, would like to have a line of pocket and table cutlery, with general hardware, etc., as a side line on commission. Address EXPERIENCE, care Mfrs' Record. m18

**SALESMAN** wants full line of cutlery as a side line for Virginia on commission; ten years' experience; reference and bond given; I will also consider any line that promises good profits; all who want Virginia covered write to W. S. BUCHANAN, Oakland, P. O., Louisa Co., Va. m18

**WANTED.**—Situation as engineer on logging road in the South; twelve years' experience with Shay and other logging locomotives; no break-downs, consequently no stopping of trains; wages reasonable. Address W. V. ELLIOTT, Lima, O. m18

**WANTED.**—By reliable coach and house painter of fifteen to eighteen years' experience situation as foreman; is also good paper stencil maker, wire tie; is employed at present, but desires a change. Address E. E. A., Lock Box 15, Pulask, Va. m18

**POSITION** wanted as salesman, estimator, draughtsman or for both; twelve years' experience blind or mill work for buildings; am practical; can operate any wood-working machine; expert on band saw, shaper and molding machine; willing to begin at the bottom with a good Southern concern where merit can win advancement. Address GENERAL, care Manufacturers' Record. m18

**DIE MAKER.**—An A die and tool maker, well up in all modern improved dies and tools for hardware, novelty and bicycle work, etc.; also compound dies, automatic feeds, stops, jigs, etc.; am a draughtsman, age 32; twelve years' experience in New England; can handle men; can start March 1. Address NEW ENGLAND, care Manufacturers' Record. m11

**WANTED.**—Position as architectural draughtsman; six years' experience in residences and office buildings. Address ADLAI OSBORNE, 307 N. Graham street, Charlotte, N. C. m11

**A YOUNG man** of executive ability, has a manufacturing and mercantile experience of 18 years in metal, wood and paint trades, as manager, salesman, buyer, cost clerk and accountant, is also familiar with advertising and catalogue work, has knowledge of mechanics and drafting, desires a position; best of references. Address H. H., care Manufacturers' Record. m11

**WANTED.**—By young man, twenty-four, situation of some kind; eight years' clerical experience; good references. Address C. G. HACKER, 113 Ashley Ave., Charleston, S. C. m11

**WANTED.**—Mechanical engineer, age twenty-four years, recent graduate of one of the leading engineering institutions of the country, with shop and drafting room experience, desires position of any kind in engineering; best of recommendations. Address ENERGETIC, care Manufacturers' Record. m11

**A YOUNG man**, good penman, double-entry bookkeeper and ledger operator (experience increased), now railroad, desires to make change; best references furnished. Address M. W., 255 Granby street, Norfolk, Va. m4

**WANTED.**—Position as gang flier; can give good references. Address J. W. Gay, Suffolk, Va. m4

**SALESMAN** with an established trade with the hardware store and house furnishing trade through the Southern States wants a good paying side line. Address SIDE LINE, 519 Freemason street, Norfolk, Va. m4

**A CHIEF ENGINEER**, having many years' experience in charge of compound, triple and quadruple expansion engines, 2000 to 2000 horsepower, also electric, hydraulic and refrigerating machinery, is open for an engagement. Address H. J., care Manufacturers' Record. m4

**A THOROUGH, energetic business man** with several years' experience in purchasing department of a large car manufacturing company desires position as buyer or assistant to manager of a railroad or manufacturing company. Address Hustler, Manufacturers' Record. m4

**WANTED.**—Position by experienced electrician as inside wireman, also switchboard builder and machine setter; understand all kinds of bells and gas lighting systems; best of reference. Address W. R. C., care J. E. Duval, Charlotte, N. C. m4

**ARCHITECTURAL iron and bridge work.**—First-class architect and technical engineer, with great experience in architectural and iron construction work, wants a position. Address C. L. G., 1750 Eastern Ave., Baltimore, Md., care L. A. Brebeck. m4

**HOSIERY SUPERINTENDENT;** am 28 years old; have 15 years practical experience in the manufacture of ribbed and seamless hose and half hose; seven years as superintendent; understand plain, three-quarter and full automatic machines; now employed, but wish to change; A1 reference. Address B. R. L., care Mfrs. Record. m4

**WANTED.**—Situation by practical steam engineer; ten years' experience. all kinds of engines, simple and compound; can furnish best references; temperate; will go anywhere; now employed. Address S. L. HILLS, North Adams, Mass. m4

**WANTED.**—Situation as boss cutter or cutter of velvets, velveteens, plush or corduroy; have had 20 years' experience. Address JOHN TAYLOR, 27 Tyler St., Lowell, Mass. m4

**WANTED.**—Situation as manager or superintendent of some manufacturing plant or sawmill; 18 years' experience in the manufacturing business; good executive ability; capable of taking complete charge of such a plant; best of references; sober and reliable. Address W. O. R., care Mfrs. Record. m4

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300 H.P. Armstrong & Sims, 100 H.P. Payne Engine; also Second-Hand Boilers in sizes from 40 to 125 H.P. 80 to 100 engines in stock to select from. Advise us of your wants.

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### SECOND-HAND ENGINES FOR SALE CHEAP

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Ten tons capacity, span 45 feet 6 inches. In first-class condition.

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We have on hand  
Twelve Good Standard Gauge Locomotives, thoroughly overhauled, complete in every detail; ready for immediate service. Various styles and sizes. Prices very low.  
For full particulars apply  
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8 3-ft. gauge Locomotives  
1 Standard gauge Locomotive.  
2 1 1/2-yard Steam Shovels.  
6 3-ft. gauge 3 yard Dump Cars.  
25 new 3 ft. gauge 2 1/2-yard Cars, for shovel or hand work.  
5 side and centre Unloading Plows.  
1 Leveling Car with plow.  
10 Hoisting Engines.  
6 Centrifugal Pumps.  
Large stock of Engines, Boilers and Steam Pumps.

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## BARGAINS! DYNAMOS IN STOCK.

Incandescent—15, 30, 35, 40, 50, 60, 100, 125, 150, 200, 250, 300, 350, 425, 450, 500, 540, 650, 750, 1000 Light.  
ARC—9, 15, 20, 25, 30, 35, 40, 45, 50, 60, 65 Light; 1200 C. P. or 2000 C. P.  
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All of Standard makes, principally Edison, Thomson-Houston, Westinghouse, Brush. Send for monthly BARGAIN SHEET giving complete list with prices. Also Motors, Arc Lamps, Instruments and Supplies.  
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Five T. H. D. 62-500 volt compound wound generators with self-oiling bearings and complete station instruments, in first-class operating condition. Any one desiring to equip their factory with electrical transmitters of power will find these machines well calculated to serve either as motors or generators, being rated at 85 horse-power. Any one contemplating purchasing electrical machinery will be profited by communicating with us.

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One second-hand "BERRYMAN" HEATER AND PURIFIER, in perfect condition and guaranteed good as new. Will sell cheap for cash. Address  
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Lathes from 12" to 48". Planers from 20" up to 60", 48", 54" and 60" Radial Drills, No. 2 Newton Milling Machine, No. 2 Screw Machine, Shapers from 6" to 30". Boilermakers' Punches, Shears, Edge Planers, Rolls, Drills, Evgines, Boilers, Pumps and Dynamos.  
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If you have any old rails—either in good condition to relay, or if only fit to be used as scrap—advise us; we buy both kinds.

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1500 tons 60 lb. Relaying Rails with Splices.  
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Lot of narrow gauge engines, flat and box cars, at Galveston, Texas. Call or write.

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We are always in the market to buy relaying rails and scrap iron of all kinds for cash.

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85 tons of 25-lb. TEE RAILS, 200 tons of 30s, 48 tons of 48s and 300 tons of 80s, with Fish Plates and Spikes; cheap; also 2-ft. and 3-ft. Gauge Locomotives and Cars. Write for particulars.

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**Relaying Rails, Locomotives and Cars for Sale.**

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From the New England R. R.

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Can be delivered most favorably in the South.  
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One Standard gauge 22-ton Porter, saddle tank, switching locomotive, cylinders 12x18; 1 standard gauge 15-ton Baldwin-Forney type, 10x14; 1 3-ft. gauge, 12-ton Shay geared locomotive; 1 3-ft. gauge, saddle tank, 9-ton Porter, cylinders 8x12; 1 3-ft. gauge, 13-ton saddle tank Porter, cylinders 10x14; 1 3 ft. Baldwin-Mogul, 16-ton, cylinders 12x18; 100 tons 30-lb. iron rails in Tennessee; 250 tons 25 and 30-lb. rails in Louisiana; 20 second-hand logging cars, 3-ft. gauge. Write for prices.  
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Several Shay Patent  
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Also other logging locomotives and cars.

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Either for Cash **SPECIAL SALE** Or on Easy Terms.

Excellent Lot of

**HEAVY PASSENGER and FREIGHT LOCOMOTIVES**

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**PASSENGER, COMBINATION and FREIGHT CARS**

Selected by our own experts from amongst some of the finest lots of Second-hand Equipment that have ever been offered by any of the Leading Trunk Lines of this country. The larger part of the Passenger Cars are Equipped with Four and Six-Wheeled Trucks, Westinghouse Air Brakes, Janney and Miller Couplers, Plush Seats, Spear Heaters, Bronze Trimmings and all modern improvements. For Specifications, Photographs, Prices and Terms address

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Railway and Highway Bridges, Roofs, Girders, Turntables, Special Forgings, etc.

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The best oiled sheathing made; will not dry out and become brittle; just the thing for lining under tin roofs that are subject to moisture.

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SYSTEM OF FIRE-PROOFING

Covers a construction of light concrete floors with imbedded sheets of heavy metal insuring strength for any requirement.

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Is the standard metal lath in all markets. Used by the United States Government and all first-class architects throughout the world. Write for illustrated book containing full information, free by mail.

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MANUFACTURERS OF  
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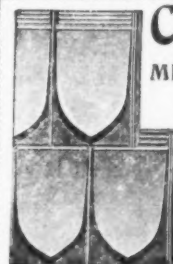
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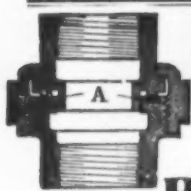
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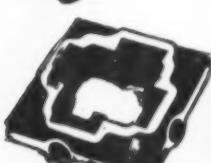
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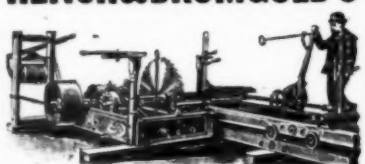
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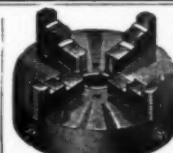
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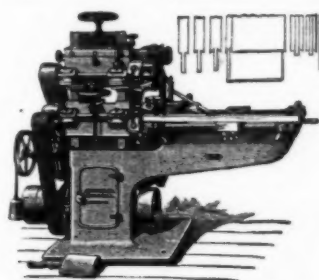
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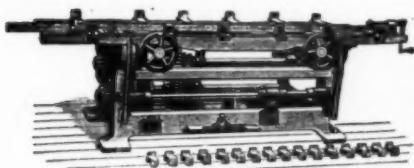
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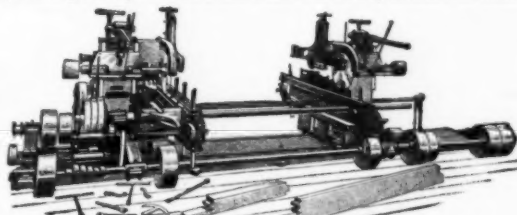


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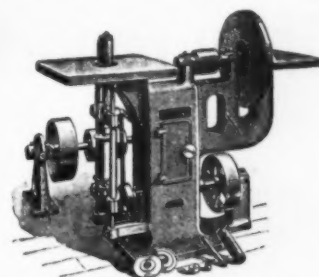
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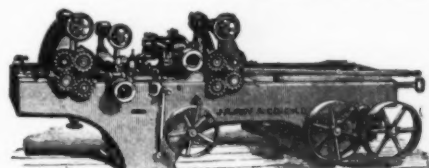


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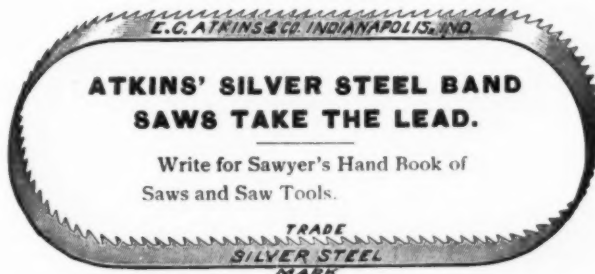
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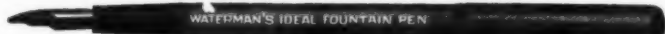
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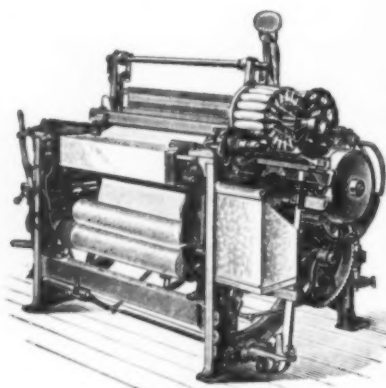
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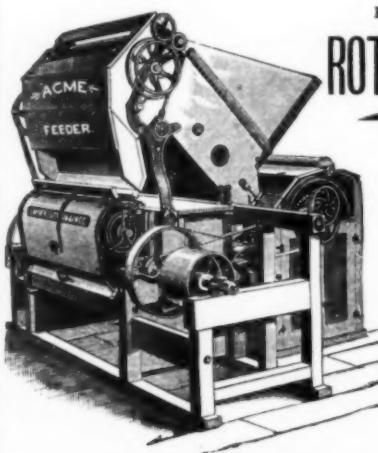
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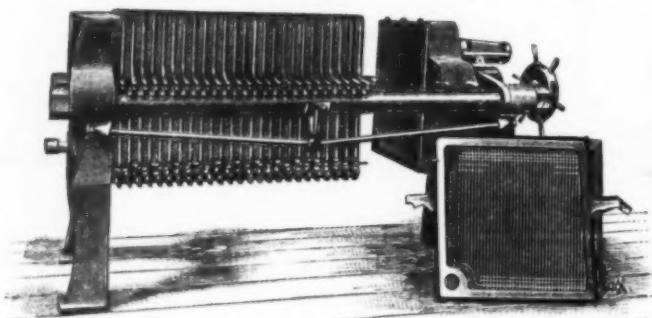
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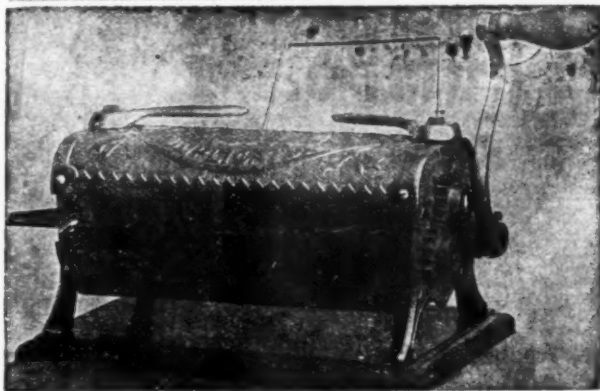
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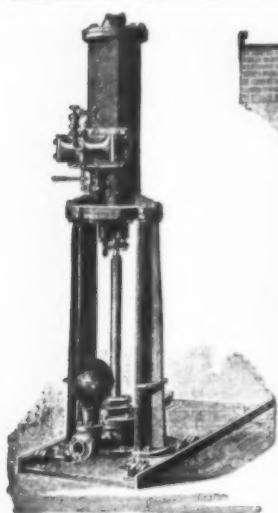
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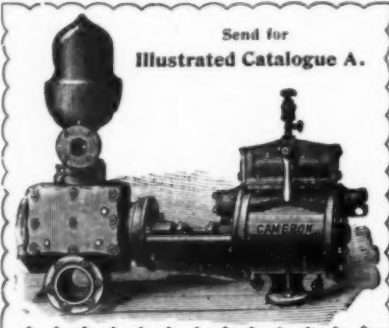
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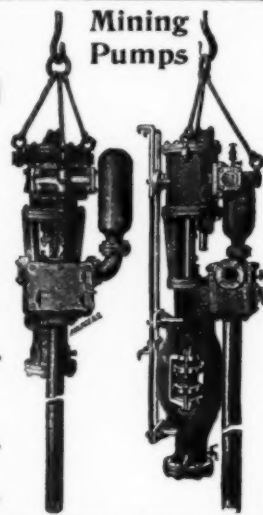
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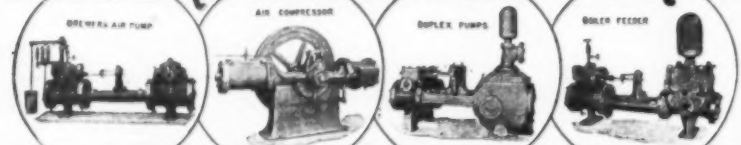
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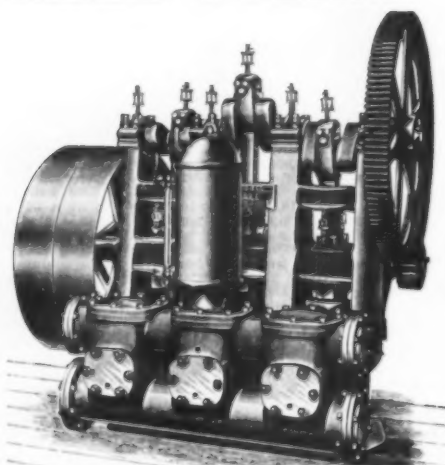
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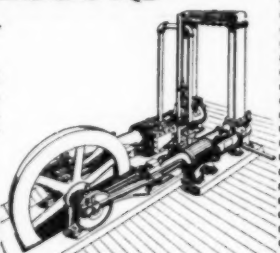
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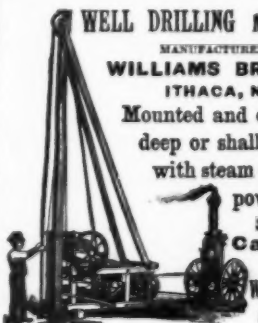
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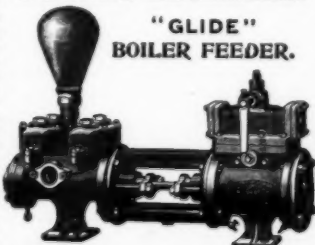
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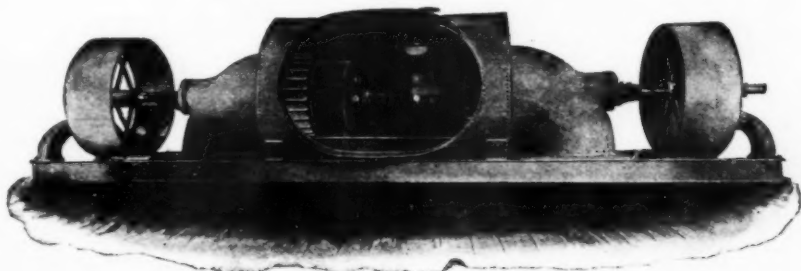
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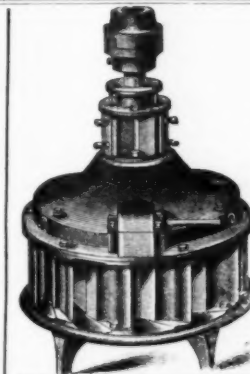


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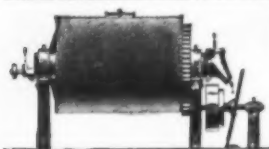
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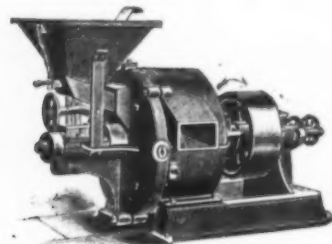
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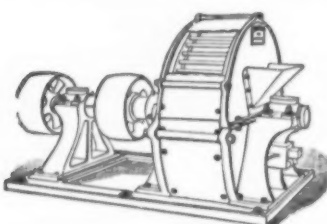
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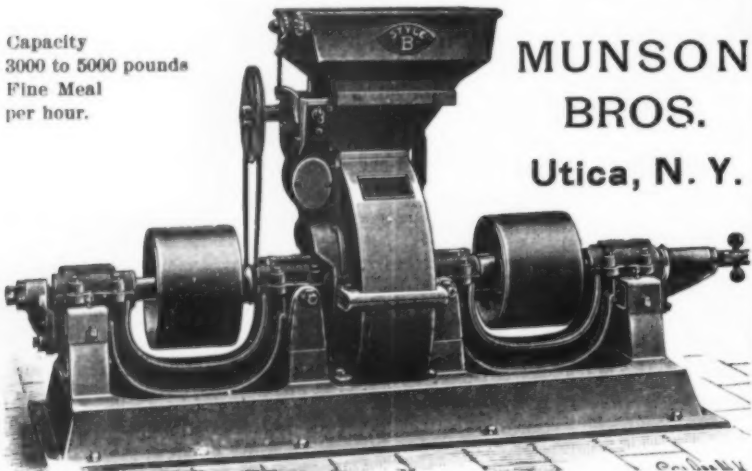
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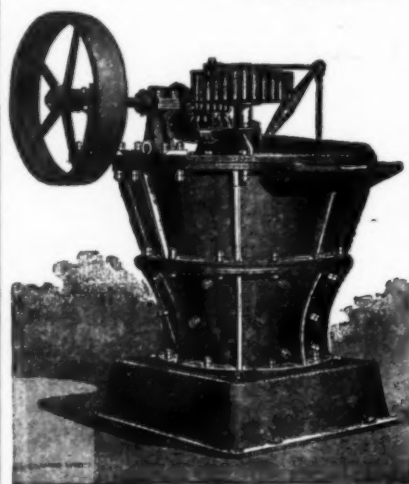
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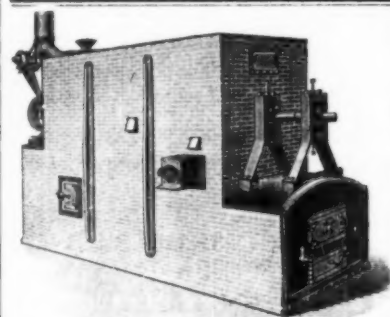
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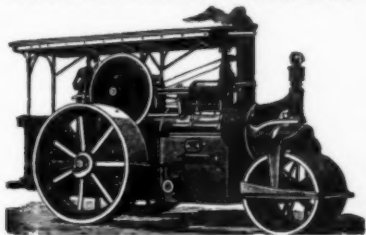


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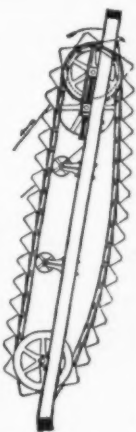


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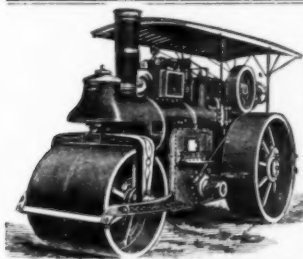


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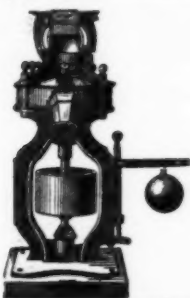
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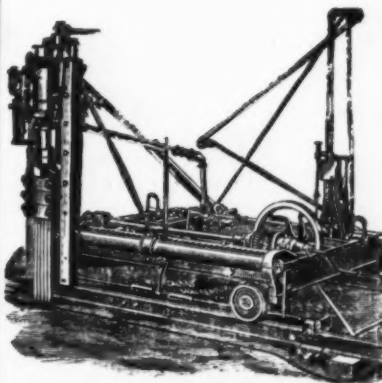
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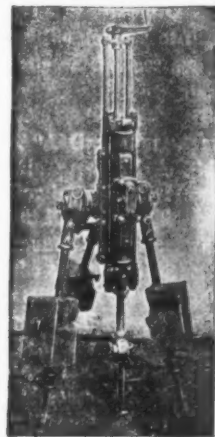
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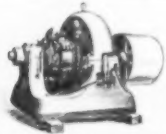
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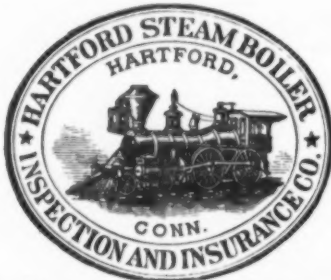
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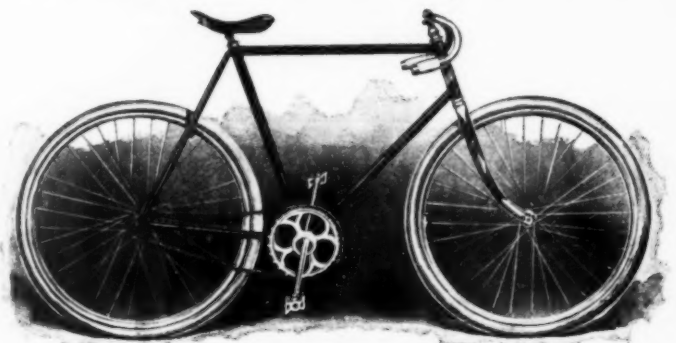
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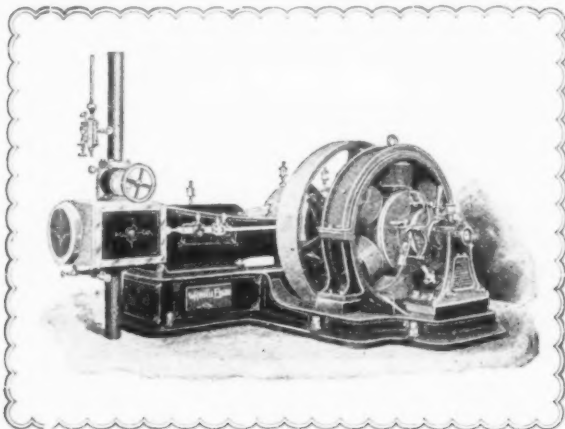
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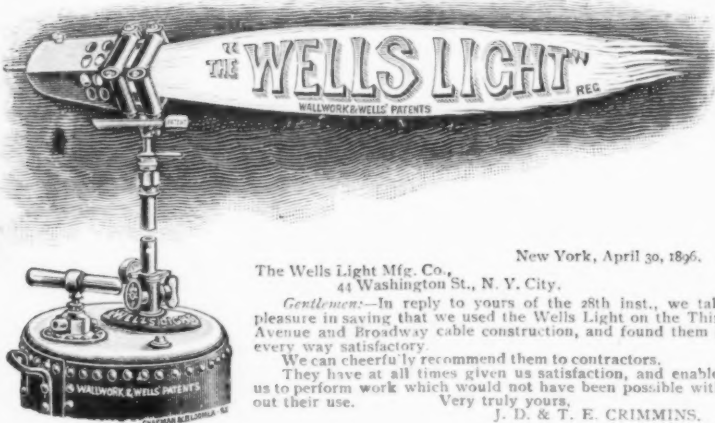
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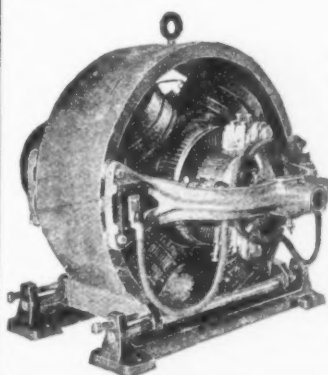
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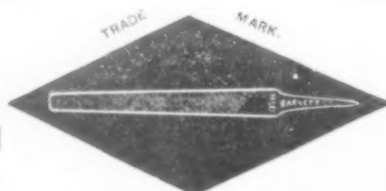
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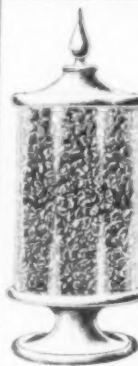
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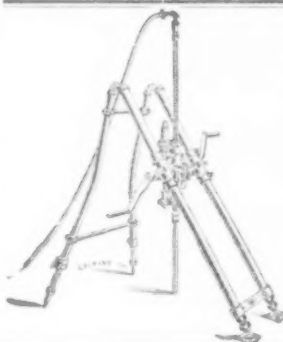
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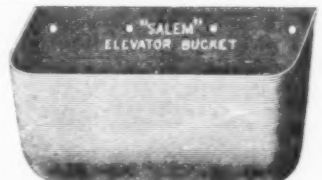
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